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China and India's Maritime Geostrategies: Implications for International Maritime Security and Scenarios for 2030

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RESUMO

Actualmente projecta-se que, até 2030, a China e Índia se venham a tornar respectivamente, a maior e terceira maior economias do mundo, tendo mantido um crescimento económico sustentado desde o início da década de noventa. Este crescimento económico por sua vez reflecte-se cada vez mais na dependência de ambos em importações de recursos energéticos, 90% dos quais são transportados por mar. Cientes disto, ambas as nações têm dedicado cada vez mais atenção às suas Geostratégias Marítimas, particularmente onde a segurança dos seus interesses marítimos está em causa. Esta é uma questão que tem atraído a atenção de vários observadores a nível internacional, não só pelo crescimento que ambos os países têm registado mas também pela subsequente modernisação das suas capacidades militares, em particular a Naval.

Recorrendo ao método de avaliação do potencial estratégico, esta dissertação analisará as Geostratégias Marítimas da China e da Índia, bem como as tendências apresentadas pelos seus esforços em aumentar respectivas capacidades de Poder Marítimo, entre 2005 e 2015, com o objectivo de determinar se estes poderão vir a impactar a Segurança Marítima Internacional a médio prazo, por exemplo, até 2030.

Nesse âmbito, o foco do estudo será inicialmente colocado em explorar os conceitos de Geopolítica, Geostratégia, Poder Marítimo, e Segurança Internacional Marítima, procurando determinar quais os aspectos de cada conceito que são mais aplicáveis à delineação das geostratégias Marítimas de ambos os países. Será estabelecido que as geostratégias das nações reflectem não só a direção geográfica para a qual se encontram os seus interesses nacionais, mas também os meios que eles estão dispostos a empregar de modo a garantir o acesso ininterrupto aos mesmos.

Mostrar-se-á que o Poder Marítimo representa uma subcomponente do Poder Nacional de um Estado, utilizado para projectar a sua influência do mar, ou sob o mar, sobre aqueles cujos interesses vão contra os interesesses do Estado em questão. Mostrar-se-á também que, sendo um Poder que é relativo ao de outras nações, os Estados que procuram

impedir a possibilidade de serem negados o acesso a rotas marítimas de comunicação, procuraram naturalmente aumentar as suas capacidades de Poder Marítimo.

Determinar-se-á também o método de avaliação do Poder Marítimo potencial, recorrendo à adaptação da equação de Avaliação do Poder, de Ray S. Cline, por parte de Vijay Sakhuja, com base nas contribuições dos teoremas de Alfred Thayer Mahan, quanto aos elementos que compõem o Poder Marítimo dos Estados, e de Julian Corbett, quanto às vantagens e/ou desvantagens resultantes da combinação de geografia com estratégia marítima.

No seguimento da contextualisação geopolítica na qual se enquadram a China e a Índia, o Poder Marítimo Potencial de ambos os países será identificado com base na equação referida anteriormente. A fim de abordar a subjectividade das variáveis que compõem a equação, os elementos de poder marítimo de cada nação serão comparados com as dos Estados Unidos, que é considerado o actor dominante na região em termos de Poder Marítimo. Recorrer-se-á também às tendências e factores extenuantes observados de modo a tomar em conta quaisquer possíveis discrepâncias que resultem do cálculo. Concluir-se-à que, apesar de nenhum dos países conseguir igualar o Poder Marítimo dos Estados Unidos a médio prazo, a China será capaz de negar o acesso à marinha norte-americana às águas compreendidas entre a primeira linha de ilhas que rodeia a costa Chinesa; a Índia por sua vez, apesar de mais fraca que a China em termos absolutos, conseguirá manter a supremacia no Oceano Índico. Uma vez que rotas marítimas vitais à economia global passam pelas àreas de influência da China e da Índia, concluir-se-á que o Poder Marítimo de ambos será capaz de influenciar a Segurança Marítima Internacional a médio prazo.

Seguidamente, a delineação das Geostratégias Marítimas da China e da Índia, com base na análise de fontes de informação estratégica, estatística e noticiária, indicará que na medida em que a grande maioria das importações de recursos energéticos, sob os quais dependem, são oriundas de nações do Médio Oriente ou do continente Africano, ambas as nações têm convergido os seus recursos marítimos económicos e militares (navegação comercial e militar) para o ocidente do Oceano Índico, a fim de assegurar que as rotas marítimas e os recursos sobre as quais são transportados, estão protegidos contra quaisquer

interrupções. Indicará também que a vulnerabilidade destas rotas marítimas a ameaças não-estatais, como a pirataria ou o terrorismo marítimo, é uma preocupação partilhada por ambas as nações.

Mostrar-se-á também que as geostratégias marítimas de ambos divergem quando o foco de atenção é colocado no Sudeste Asiático, particularmente para o Mar Meridional da China. Neste ponto mostrar-se-á que, presença incremental da Marinha do Exército Popular da China no Oceano Índico, juntamente com a construção Chinesa de vários portos e bases navais em países como o Bangladesh e o Paquistão, tornou-se motivo de preocupação para a Índia e que por sua vez procura reforçar a presença no Sudeste Asiático de modo a servir de contra-balanço. No que respeita a China, juntamente com os seus esforços para modernisar a Marinha, a postura assertiva e as tácticas agressivas que emprega com os países do Sudeste Asiático, com os quais contesta a soberania das águas do Mar Meridional da China, levam a que os actores regionais procurem também aumentar as suas capacidades de defesa e reforçar ou estabelecer acordos e alianças militares com poderes extra-regionais como os Estados Unidos e a Índia, em linha com a teoria de Equilibrio de Ameaça da perspectiva Realista de Relações Internacionais.

Por fim, recorrer-se-á à formulação de cenários de modo a ilustrar de que modo é que ambas as nações poderão afectar significativamente a Segurança Marítima Internacional a médio prazo, mais específicamente em 2030, juntamente com as implicações que de tal cenário resultaria.

ABSTRACT

China and India are projected to become, respectively, the largest and third largest world economies by 2030, having experienced sustained economic growth since the early 1990s, which in turn is increasingly paralleled by their dependence on energy imports, 90% of which are transported by sea. Cognisant of this, both nations have progressively devoted more attention to their Maritime Geostrategies, particularly where the securitisation of their maritime interests is concerned.

The following dissertation will examine China and India's Maritime Geostrategies, and the tendencies presented by their efforts to increase their respective Sea Power capabilities, between 2005 and 2015, in an attempt to determine whether these may come to impact International Maritime Security in the medium term, i.e. by 2030. To do so, focus will initially be placed on exploring the concepts of Geopolitics, Geostrategy, Seapower, and International Maritime Security, and which aspects of each concept are most applicable in determining China and India's maritime geostrategies. Furthermore, based on contributions from Alfred Thayer Mahan's writings on Sea Power and Julian Corbett's writings on Maritime Strategy, Vijay Sakhuja's adaptation of Ray S. Cline's Power Assessment equation will be used to determine China and India's respective Sea Power capabilities.

Following the assessment of each nation's Sea Power potential, and an analysis of their respective Maritime Geostrategies, it will be shown that China and India's Maritime Geostrategies are not only capable of affecting International Maritime Security, in the medium term, but also that their efforts to counter existing and perceived maritime threats fall in line with the realist perspective's notion of Security Dilemma. Scenario Building will also be resorted to, in order to illustrate how, by 2030, each nation can come to be involved in events with major impacts to International Maritime Security.

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ACRONYMS

A2/AD – Anti-Access / Area -Denial

ASEAN – Association of the Southeast Asian Nations

BBC – British Broadcasting Corporation

CCP – Chinese Communist Party

CEBR – Centre for Economics and Business Research

CIA – Central Intelligence Agency (United States of America)

CMC – Central Military Commission (People's Republic of China)

CoS – Command of the Sea

DWP – Defence White Papers

EEZ – Exclusive Economic Zone

EIA – Environmental Information Administration

EoS – Elements of Sea Power

GDP – Gross Domestic Product

HQ – Head-quarters

ICC-IMB – International Chamber of Commerce's International Maritime Bureau

IISS – International Institute for Strategic Studies

IN – Indian Navy

IOR – Indian Ocean Region

ISI – International Services Intelligence (Islamic Republic of Pakistan)

LPG – Liquefied Petroleum Gas

MMS – Maritime Military Strategy

MOD-GOI – Ministry of Defence of the Government of India

NIDS – National Institute for Defence Studies (Japan)

PAP – People's Armed Forces (People's Republic of China)

PLA – People's Liberation Army (People's Republic of China)

PLAN – People's Liberation Army Navy (People's Republic of China)

PRC – People's Republic of China

PRC-MOD – People's Republic of China Ministry of Defence

PSC – Politburo Standard Committee (People's Republic of China)

SCB – Standard Chartered Bank

SCS – South China Sea

SOE – State Owned Enterprises

SLOC – Sea Lines of Communication

TAPI – Turkmenistan-Afghanistan-Pakistan-India Pipeline

UN – United Nations

UNCLOS – United Nations Convention on the Law of the Sea

UNCTAD – United Nations Conference on Trade and Development

USN – United States Navy

WWII – World War Two

INTRODUCTION

The following study is a dissertation developed within the Master's Degree of Strategy, for the attainment of the degree of Master and guided by Professor Doctor Sandra Balão, which aims to analyse the maritime component of China and India's geostrategies, between the periods of 2005 to 2015, in order to illustrate how their growing Sea Power capabilities can potentially impact International Maritime Security in the years to come.

The choice of the subject matter is the result of a personal inclination towards strategic and security studies focusing on the People's Republic of China (PRC), which in turn grew out of a number of end-of-term essays, written throughout the above mentioned Master's degree, either appointed by the respective module lecturers or, eventually, by personal choice. Two essays in particular served as the foundation for the following study: "*A Modernização do Exército Popular de Libertação*[1]" (Costa Pinto, 2010), for the subject of Política Externa das Grandes Potências[2] lectured by Professor Doctor Balão, and "*O Conflito do Mar Meridional da China – Os Possíveis Cenários*[3]" (Costa Pinto, 2011) for the subject of Técnicas de Tomada de Decisão[4], lectured by Professor Doctor Carlos Gonçalves.

Through discussions with Doctor Balão, the theme and subject matter of the study were tailored to meet the escalating situation of the South China Sea disputes. Through further discussion with Doctor Balão and Professor Doctor Pedro Matias, it was decided that India should be included in the study, not only because of its status as an emerging global power, with increasing presence in Southeast Asia, but also as the resident regional power in the Indian Ocean Region (IOR), which in turn figures prominently in the PRC's geostrategy (Sakhuja, 2011).

[1] Translation by author: "*The Modernisation of the People's Liberation Army*"
[2] Translation by author: "*Foreign Policy of the Great Powers*"
[3] Translation by author: "*The South China Sea Conflict – Possible Scenarios*"
[4] Translation by author: "*Decision Making Methods*"

Relevance to the Current International Context

Since the beginning of the 20th century, the economic rise of Asian powers like China, India and, more recently, other nations of Southeast Asia, has been accompanied by the parallel growth of their respective defence budget and, more specifically, their navies (Till, 2012). This is unsurprising, not only as it is commonplace for nations experiencing economic growth to further invest in national security (Prakash, 2010) but also given that many of these economies, particularly those of China and India, are highly dependent on trade and energy resources transported by sea (EIA, 2014b; EIA, 2014e; Sakhuja, 2011).

According to Prakash (2010), the current world stage still retains many of the anarchic traits advocated by the realist paradigm of international relations (Buzan & Hansen, 2009; Cravinho, 2006; Hough, 2004, Baldwin, 1997; Ullman, 1983), characterised by the individual pursuits of nations aiming to secure access to resources and territory, as well as expand their influence amongst others, often at the expense of latter. Where China and India are concerned, this is increasingly reflected in their efforts to establish and maintain access to overseas natural resources (energy or otherwise), whether through diplomatic and financial means or through the protection and securitisation of the routes on which they're transported, the Sea Lines of Communication (SLOC).

In 2009 the People's Liberation Army – Navy (PLAN) began its first operations beyond Southeast Asia, patrolling the waters of the western Indian Ocean and the Gulf of Aden, in response to the high levels of piracy registered at the time. Hailed by some as an indicator of China's willingness to participate as a responsible stakeholder, in international affairs and security, others remain weary (O'Rourke, 2013).

On this note, a number of small scale tensions between China and its neighbours in the East and South China Seas, where large numbers of untapped energy reserves are believed to be stored (EIA, 2013b), have gradually escalated in recent years. The PRC's growing dependence on energy resources is believed to be the cause of its heightened aggression in these disputes (O'Rourke, 2012). Its expanding naval capabilities, compounded with an increasingly assertive and aggressive behaviour towards other claimants in the region, have

led some to question whether the modernisation of the PLAN is truly for defensive purposes, as advocated by the PRC government.

Furthermore, China's growing influence in the IOR, manifested through the increased presence of its Navy and the construction of port facilities (both commercial and military) in strategic locations throughout the IOR's littoral, is seen by some as a cause for concern, India chief among all (Hughes, 2014). That many of these bases are in countries with which India shares strained relations, adds to its concerns. One theory widely circulated in the Indian media and shared by some of India's high ranking officials and scholars, is that should China manage to establish a permanent military presence as these bases, it would have the potential of encircling and denying India's access to the region's SLOC (Mohan, 2010; Kaplan, 2009).

Such concerns could be seen as one of the reasons for India's growing rapprochement towards the United States, and other Southeast Asian actors such as Japan, the Philippines and Vietnam, all countries with whom China currently maintains maritime disputes. Also worthy of note are the annual Malabar naval exercises, carried out between the IN and U.S. Navy (USN) since 1992, which since 2007 have expanded to invariably include Australia, Japan and Singapore (Pillalamarri, 2014).

According to its Maritime Military Strategy (MMS), maritime access to Southeast Asia is a major imperative for India, as it holds diplomatic and economic trade links with many of the region's nations, including the PRC (IHMDN, 2007).

Conversely, some authors argue that China's aggressive behaviour, along with its pursuit of a modernised sea going navy, is a response to the continued and increasing presence of the USN in its immediate vicinity. Surrounded by a number of island chains that constrain its access to the Pacific Ocean, through narrow straits that can be potentially blocked, China considers these passages a source of vulnerability (Xu, 2006). That the above mentioned Malabar exercises have twice now taken place off the coast of Japan, further compounded by India and Japan's growing defence cooperation (Pollmann, 2015), also speaks to China's concerns.

As each Nation in the region seeks to safeguard their maritime interests, either individually or collectively, through the modernisation of their navies and/or concerted efforts and defence agreements, the 'security dilemma' advocated by the realist paradigm of international relations (Walt, 1991), seems to be in development (IISS, 2014).

It is thus unsurprising that the issue of China, India and maritime security in Southeast Asia and the IOR have gained increased focus. In an increasingly interconnected world, made even more so thanks to maritime trade (Sakhuja, 2011), should any of these disputes and/or rivalries escalate to an open conflict the repercussions can potentially stretch out and impact the international arena as a whole.

Relevance to the field of Strategy

However, despite the widespread acknowledgement of the potential for conflict or, at the very least, destabilisation of maritime security, the research carried out for this study failed to find instances where examples of events and/or circumstances that could lead to such situations are illustrated. While the need for such illustrations may be negligible, it is the contention of this study that their inclusion would serve as an added benefit, not only as a means to further contextualise the arguments established but also as a potential aid to strategic planning.

This topic is well suited to the field of Strategy, not only as it focuses on China and India's geostrategies but also because it seeks to analyse both nations' potential courses of action, under competitive and non-competitive circumstances, through the use of specific means, which falls in line with Ribeiro's understanding of the discipline as both"*(…) a ciência e a arte de edificar, dispor e empregar meios de coacção num dado meio e tempo, para se materializarem objectivos fixados pela política, superando problemas e explorando eventualidades em ambiente de desacordo*[5]" (Ribeiro, 2009:22).

[5] Translation by author: "*(…) the science and art of building, arranging and employing coercive means in a given environment and period, to achieve objectives set by politics, overcoming problems and exploring eventualities in an environment of discord*".

As shall be explained in detail further ahead, a nation's geostrategy not only indicates the direction towards which its national interests lie but also the means and/or course of action it is willing to employ to achieve and secure these. Understanding and being able to recognize a nation's geostrategy is a useful tool not only for academics of the field but also for national leaders and planners alike.

Objectives of the study

The main objective of this study is to identify and highlight China and India's maritime geostrategies, the tendencies presented by their pursuit to modernize and increase their sea power capabilities, and their potential impact and possible ramifications to international security.

On this note, Mendes Dias (2010) explains that in order to carry out any geostrategic analysis, a strong conceptual understanding of geopolitics is necessary given that "*a geopolítica entra na esfera da geostratégia, como no caso da concepção de cenários de evolução, que possam implicar ou materializar conflitos*[6]" (2010:64). However, as Pezarat Correia explains, "*o termo Geopolítica está na moda, é utilizado a propósito de tudo e nada [correndo] o risco de [perder] significado próprio*[7]" (2008:17).

This highlights the importance of establishing a firm understanding of both Geopolitics and Geostrategy, to ensure that no misinterpretations are made. As such, while this study does not aim to provide universally acceptable definitions for either term, establishing clear working concepts for both will constitute its initial objective.

In order to do so, a strong understanding of Power must first be established, as it is inherent to the concepts of geopolitics and geostrategy (Mendes Dias, 2010). On this note, and for the purposes of this study, Power should be understood as a set of means capable of coercing others into a specific conduct (Lara, 2009), and/or to overcome the power of other agents that fight for results favourable to their own interests (Moreira, 1993).

[6] Translation by author: "*geopolitics enters the realm of geostrategy, as in the case of designing evolutionary scenarios, in which conflicts may be involved or materialized*".
[7] Translation by author: "*the term geopolitics is fashionable, it is used in relation to everything and anything [running] the risk of [losing] its own meaning*".

Lara is careful to point out that coercion and the threat of violence are not the sole means of achieving objectives. However, Moreira also argues that it is senseless to "*(…) afirmar que um Estado tem poder (…) se os instrumentos à sua disposição não lhe derem a capacidade de influenciar o comportamento de outro Estado, ou dos detentores de interesses opostos*[8]" (1993:110).

In support of this notion, and directly relevant to this study, Ralf Emmers argues that the interplay of the geopolitical attributes of territory, natural resources and power considerations bare influence on the maritime disputes in East and Southeast Asia, given that:

> *[these] are all linked and not easily separable from one another. Territory is often considered valuable on the basis of the natural resources that are found there, while power may be viewed as derivative of the controlled territory. In that sense, natural resources and territory may be regarded as capable of increasing or decreasing the power position of a state in the international system* (2010: 9-10).

Where territory is concerned, it should be made clear that geographic location is as equally important as geographic composition (resources), given that the control of a particular geographic location might be strategically advantageous (Mahan, 1890; Corbett, 1911).

Further to this, Sacchetti (2009) explains that all countries inherently gather a number of national values and drivers that must be taken into consideration when looking to the future, particularly when building a national strategic mind-set. Once this is achieved, political objectives are then drawn, which guide the concept of National Strategy which in turn "*preocupa-se, fundamentalmente, com a selecção dos factores do poder nacional que*

[8] Translation by author: "*(…) claim that a State has power (…) if the instruments at its disposal cannot deliver the capacity to influence the behaviour of another State, or of those who hold opposing interests*".

irão permitir alargar aqueles objectivos, em ambientes de antagonismo[9]" (2009:119). Ribeiro (2010) explains that it is these factors of national power that allow governments to outline the strategic action they consider will best ensure all political objectives are achieved.

According to Sacchetti (2009), when we focus specifically on the subject of strategic mind-set and the sea, not only are we focusing on an area that precedes the outlining of a strategy but also limiting ourselves to a very specific area of the concept of National Strategy. Further to this, and directly relevant to our study, Patil (2007) argues that the fundamental purpose of Sea Power is the use of the naval forces, both in peacetime and war, as "*key components in a nation's grand strategy which conceptualises the use of political, military and economic resources to achieve national objectives*" (2007:521).

On this note, it is clear that in order to carry out an accurate analysis of China and India's maritime geostrategies, and determine their potential impact on maritime security, a strong understanding of Sea Power and how it applies to both is needed. As such, this too will constitute one of the early objectives of this study.

Sea Power, in the sense to be discussed throughout this dissertation, can find its origins in one of the earliest contributors to geopolitical thought, Admiral Alfred Thayer Mahan (1840-1914). Of equal importance are the contributions of the British Historian, Sir Julian Corbett (1854-1922), whose focus on the nature and ultimate objective of naval warfare highly compliments Mahan's writings.

As such, a careful examination of Mahan and Corbett's writings on Sea Power will be carried out to determine which factors are more conducive to forming a strong understanding of China and India's current Sea Power capabilities. It is important to note that other classical authors, such as Raoul Castex (1878-1968), equally contributed to the field of maritime power and strategy; however, due to the fact that the literature analysed for this study focuses almost exclusively on Mahan and Corbett, such authors won't be discussed throughout this study.

[9] Translation by author: "*(…) concerns itself, fundamentally, with the selection of factors of the national power which will allow the expansion of those objectives, in antagonistic environments*".

As this study aims to determine whether China and India's maritime geostrategies can potentially impact International Maritime Security, establishing an understanding of what is meant by the latter term will also be one the early objectives of this dissertation.

Revision of Literature

The research carried out for this study made use of a variety of sources, which included monographs and published journal articles, online articles from academic as well as news based sources, and reports, from think tanks and/or governmental sources, and finally sources of statistical nature, from national (i.e. United States' Energy Information Administration [EIA]) and international (i.e. World Bank) institutions.

With regards to those sources which focused on such issues of China and India's maritime rivalry and/or naval modernisation, it is important to note that almost no mention of geostrategy could be found, for either of the actors. In the few cases where such mention is made, it is used almost exclusively as an alternative for the concept of geopolitics, thereby strengthening the argument that the terms are often mistaken for one another (Pezarat Correia, 2008).

It should also be mentioned that Vijay Sakhuja's "Asian Maritime Power in the 21st Century" (2011) and Geoffrey Till's "Asia's Naval Expansion" (2012) were of paramount influence and inspiration to this study, not only due to the fact that both focus precisely on the study's subject matter but also because both transmit the information and concepts through in the clearest and most informative way.

Furthermore, while both discuss the concept of Sea Power extensively, each contributes uniquely to the development of the subject of its study. Sakhuja's maritime calculus – which will be analysed further ahead – provides a quantifiable means of evaluating and comparing the potential Sea Power of nations; Till, on the other hand, contributes to the use of this equation by presenting most clearly the idea of the relativity of Sea Power, a matter that will prove crucial in assessing both China and India's Sea Power potential.

Internal Structure

The following dissertation will be divided into three parts. The first, which will focus on the theoretical aspects of the study, such as Geopolitics, Geostrategy, Seapower, and International Maritime Security, will seek to establish which aspects of each concept are necessary and/or most applicable to identifying and understanding China and India's maritime geostrategies. Furthermore, the concepts of Geostrategy and Sea Power will be analysed in conjunction to identify the latter's role in maritime geostrategy. Part I will also briefly analyse Sakhuja's (2011) adaptation of Ray S. Cline's (1977) Power Assessment equation, and how this can be used to help determine China and India's respective Sea Power capabilities, namely within this document. It is important to point out that, while the use of the equation can help in forming a closer understanding of a nation's Sea Power, not all variables are equally quantifiable, as some are highly subjective and others are altogether intangible (Sakhuja, 2011). Finally, Part I will also seek to clarify exactly how the maritime geostrategies of nations can impact International Maritime Security. At the end, a summary of all main points will be established and how these will be used throughout Part II in establishing how China and India's Maritime Geostrategies can impact International Maritime security in the medium term.

Part II of this dissertation will begin by establishing the current geopolitical context and trends surrounding China and India, and seek to identify China and India's elements of sea power, and current trends, in order to calculate their Sea Power potential through the above mentioned equation. In order to address the subjectivity of its variables, each nation's components will be factored against those of the United States which, according to various authors (Till, 2012; Sakhuja, 2011; Tangredi, 2002) is the dominant actor in the region in terms of Sea Power. The details of this process will also be discussed in Part II. Following this, Part II will also seek to identify both nations' maritime geostrategies, by identifying the geographic direction of their national interests, accessible primarily by sea, and the means undertaken to ensure continued and undisrupted access to these. After identifying state and non-state threats perceived by both nations, including current and those believed to be likely to escalate/emerge in the near future, Part II will also seek to evaluate how China and

India may impact International Maritime Security through their efforts to mitigate these perceived threats, in other words through their Maritime Geostrategies, in the medium term based on the trends presented.

Based on the data presented throughout Part II, the third part will present two scenarios, centred around China and India respectively, but in which both are stakeholders, with the objective of highlighting how both nations may potentially impact International Maritime Security in the medium term, i.e. 2030. Though further details of the process will be provided in the Methodology section below, each scenario will seek to highlight the respective nation's capacity to impact maritime security, whether as a threat or a safeguard, the immediate and medium term consequences of the impact, and the implications for all actors directly involved.

Obstacles and Limitations to the Study

As no study of this dimension is carried out without incurring difficulties or obstacles, it is important that the main challenges faced in this study's development, which have not previously been mentioned, be now addressed.

While preparations and initial research for this dissertation began at the end of the curricular year 2010/2011, personal and financial circumstances at the end of 2011 led the author to move country in search of employment, resulting in multiple and extended delays where research and development of this study were concerned. However, through e-mail exchanges and occasional meetings through skype, and a bi-annual meeting in Portugal with Professor Balão, it was possible to gradually shape and ultimately construct the following study.

Where research is concerned, while the author had access to a wealth of knowledge, such as the prestigious British Library of London, in the United Kingdom, the library's policy regarding the requisition of books for research made it impossible to take any of these for consultation outside of the library study rooms, thus making the use of it limited to a short amount of hours over each weekend. Also, while this study has been greatly complimented by contributions from Portuguese authors, some of whom from the very institution this

study is carried out for, access to further contributions was unsuccessful, either due to their inexistence as an online resource or at the British Library.

Given the fact that the theatre of International Relations is a phenomenon of complex and continuous change, it is important to clarify that all conclusions established as a result of this study are done so based on data collected up to the end of March, 2015. In other words, this study does not take into account any events or occurrences that may have potentially altered the international relations environment thereafter.

Finally, while recognising that this study could have been vastly extended and further complimented, the institutional word limit for its development made this impossible. However, these can hopefully be addressed in future endeavours carried out by the author.

METHODOLOGY

At the inception of this study, its aim was to try to determine which impacts to International Security could be expected, in the medium term, from the tendencies presented by the maritime dimension of China and India's geostrategies, from the beginning of the 21st Century, up to 2010.

Through the subsequent investigation and exchanges with Doctor Balão, it was determined that while the objective itself was a valid one, the scope of possibilities was much too wide to be accurately discussed and shown, given the existing institutional, financial and logistical restrictions in place. Furthermore, with the growing interest of illustrating exactly how such impacts can come to pass, along with their respective repercussions, it was determined that a more feasible endeavour would be to focus on a few of the most suggested possibilities, and attempt to not only evaluate the possibility of their occurrence but also illustrate these through scenarios. Moreover, the delays incurred over the aforementioned extenuating circumstances led the time period under analysis to be updated to reflect the tendencies presented from 2005 to 2015.

As such, this study aims to provide an answer for the following question: Can China and India's current maritime geostrategies, based on the trends presented by their efforts to modernise and increase their respective Sea Power capabilities, significantly impact the stability of International Maritime Security in the medium term, i.e. by 2030?

In order to answer this question this study will have to break it down to its main areas of focus: the maritime dimension of China and India's geostrategies and International Maritime security.

Where geostrategy is concerned, as both nations further develop their economies and become increasingly dependent on energy resources that lie beyond their shores, the ability to ensure the safe and undisrupted transportation of these, by increasing their Sea Power capabilities, takes precedent in their security and strategic calculations.

Nations, as has been established, traditionally seek to increase their power in order to ensure their interests and objectives are met, particularly if these go against the interests of others. On this note, and focusing on International security, this study will aim to answer the following sub-question: Will China and India's growing Sea Power capabilities, particularly its naval forces, be capable of impacting international security? In order to do so, the concept of Sea Power and how nations make use of it will be considered.

Where maritime security is concerned, building from the realist perspective, through the premise of 'security dilemma', this study will also attempt to show how securitising actions undertaken by one actor can influence the actions of another; more specifically, it will focus on India's efforts to balance against China's growing assertiveness in the East and South China Seas, and its growing influence in the IOR through its alleged "string of pearls" strategy. However, it will also make use of contributions from the pluralist perspective and take into account how non-state threats, and how these factor into both nations' security concerns, can potentially impact International Maritime Security.

Further to this, the methodology of this study will be the evaluation of strategic potential, as advised by Mendes Dias when the main objectives "(…) *forem a avaliação (…) em contexto comparativo, (…) não esquecendo que quando nos referimos a potencial estratégico, significa a existência de estratégia e dos meios/formas/elementos, de diferentes tipologias que [possam] a apoiar e concretizar*[10]" (2011:94). On this note, it is also important to point out that the nature of this methodology is mixed, in the sense that it will resort to data that is both quantitative and qualitative in nature to analyse and assess China and India's Sea Power potential,

Finally this study will also seek to show that in an increasingly globalised and interconnected, world, the maritime dimension of China and India's geostrategies, and the naval modernisation each is currently employing, can potentially result in the disruption of the aforementioned SLOC.

[10] Translation by author: "*(…) are the evaluation (…) in a comparative context (…) without forgetting that when we refer to strategic potential, it implies the existence of strategy and the different types of means / forms / elements that [can] support and see it through*".

The question of how China and India's geostrategies can impact International Maritime Security in the years to come is a complex one with multiple possible answers, each imbedded with its own complexity. One of the main aspects of this complexity is the fact that the answer focuses on the future, the divination of which is impossible. However, Michel Godet argues that:

> *Future awareness [is one of] the three golden rules[11] of the strategic culture from which derives the strength of [actors] displaying the highest levels of competitiveness and excellence. [Without it, an actor] is like a ship without a lookout, without a heading or without a crew; it will not be able to make port and risks foundering in the rough seas ahead.* (1987:xv)

Like many others (Ringland, 2006; Neuman & Øverland, 2004; Schwartz, 1998; et al.), Godet advocates Scenario Building as a useful tool for Prospective Analysis and/or Future studies, inasmuch as "*[the] uncertainty of the future can be appraised through a number of possible scenarios within the field of probable*" (2000:7). It is important to reiterate that it isn't possible to predict the future; at best one can make a well informed estimated guess, based on a number of known variables and tendencies. Scenario building, as Peter Schwartz points out, "*[is] not about predicting the future, rather [it is] about perceiving futures in the present*" (1998:36).

Dodds (2007) describes Geopolitics as highly visual in nature, creating images through the classification of territories and populations and using maps, tables, and pictures to achieve this. Ó'Tuathail, Dalby & Routledge (2006) and Flint (2006) support this argument, suggesting that geopolitics enables the perception of a comprehensive vision of world politics, through frameworks within which events in one place can be related to a larger global context, transforming the complexity of world affairs into an 'apparently' clear picture (Mendes Dias, 2010; Dodds, 2007; Flint, 2006; Ó'Tuathail, Dalby & Routledge,2006). This reinforces the choice to resort to scenarios as a means of highlighting the potential impacts of China and India's Geostrategy on International Maritime Security.

[11] Which Godet lists as Future Awareness, Strategic Resolve and Joint commitment as the Three Golden Rules of the Strategic Culture necessary in any organization's aim for competitive excellence.

However, it is important to note that the level of prospective analysis and scenario building advocated by Godet and others, is aimed primarily at corporations, think tanks and/or academic institutions, requiring a great deal of time, financial and logistical resources. As this study is being carried out in the individual capacity of the author, the scenario building method carried out in this study will be based on Ryan's (2012) approach to Schwartz's "Art of the Long View" (1998). While adapted to the circumstances and resources available, this study will nevertheless endeavour to ensure the utmost accuracy and plausibility in the construction of all scenarios.

In order to do so, a database of quantifiable and statistical information (dating back to the early 1990's) and perceived trends (up to 2050) will be established through the collection and analysis of the following data:

- Historic reviews and news articles, past and current;
- Demographic statistics and forecasts;
- Economic and Energy reports and forecasts;
- Military balances; and,
- Official documents and statements.

By placing these issues in the form of scenarios, this study hopes to not only emphasize the importance of their study for the fields of Strategy and Security Studies, but also to potentially open new perspectives in future approaches to their study.

1 GEOSTRATEGY AND MARITIME SECURITY

According to Fernandes & Duarte, broken down to their basic components, "*[a] Geopolítica e Geoestratégia são, respectivamente, a política e a estratégia referidas a partir da geografia num senso amplo*[12]" (1998:12). They raise the point that where geostrategy is concerned, strategy takes a dimension that goes beyond the conventional military sense. As the focus of this study is China and India's geostrategy towards the maritime domain, the question of Sea Power will need to be equally and adequately contextualised, from its conceptual origin to its applicability to China and India in present times. In order to do so, a brief look at the origins of geopolitics and geostrategy is necessary towards accomplishing this, placing however an obvious and necessary emphasis on the maritime domain.

1.1 GEOPOLITICS AND GEOSTRATEGY: ROOTS AND CONCEPTUAL EVOLUTION

Though the study of geography and its relation and importance to state affairs can be traced as far back as Ancient China and Greece[13] (Mendes Dias, 2010), many authors agree that our understanding of geopolitical and geostrategic thought stems from Political Geography[14], particularly from the contributions of authors such as Friederich Ratzel (1844-1904), Rudolf Kjellen (1864-1922), Alfred Thayer Mahan, Halford Mackinder (1861-1947), Karl Haushofer (1869-1946), among others (Lara, 2009; Pezarat Correia, 2008; Dodds, 2007; Martins, 1996).

Two main perspectives emerged within the field of classical geopolitics: the Restrictive perspective and the Global Perspective. While both aimed at describing State behaviour within the international community, the former focused solely on the State as a single actor and its geographic position within the world stage, and the latter focused on the geographic layout of all states, seeking to understand how the control of certain key points could benefit or threaten states in particular (Flint, 2006). The Global perspective also developed two main

[12] Translation by author: "*Geopolitics and Geostrategy, in a broad sense, are respectively politics and strategy referred to from geography*"
[13] For instance: Sun Tzu and Aristotle.
[14] See Annex A - Glossary

approaches to the field, which focused on Continental Power and Maritime Power respectively[15] (Mendes Dias, 2010; Bessa, 2007).

Of these classical authors, the American Admiral Alfred Thayer Mahan (1840 – 1914) is of particular interest to our study, as his writings on the concept of Sea Power were not only a critical contribution to Geopolitical thought but also considered by many, as the cornerstone for modern maritime perspectives on Geopolitics (Sakhuja, 2011; Mendes Dias, 2010; Dodds, 2007; Flint, 2006; Ó'Tuathail, Dalby & Routledge, 2006). Though we will look more closely at his writings further ahead, it can be briefly summarised that Mahan (1890) postulated that access to and control over the world seas had been the driving force behind global power throughout the preceding half century, and thus recommended the accrual of Sea Power as essential for any nation seeking to increase and/or establish its presence in the world arena.

Due to the cultural beliefs of the time, the classical theories of geopolitics were imbued with ideological and deterministic drives aimed at providing guidance to statesmen on attaining/maintaining global supremacy (Mendes Dias, 2010; Dodds, 2007; Flint, 2006; Ó'Tuathail, Dalby & Routledge, 2006). Ultimately, following its association with German *Geopolitik*[16] and Hitlerian ideology, Geopolitics was temporarily excommunicated as a field of study. However, despite the fact that it would be several years before the nomenclature resurfaced, the study and importance of geopolitics carried on.

According to Pezarat Correia (2008) it was around this time that the term Geostrategy surfaced, potentially as a result of the excommunication of geopolitics. However, he argues that given their focus on the control of strategic passage ways and the ultimate goal of global supremacy, the classical geopolitical theories of Mahan, Mackinder, Haushofer, etc., should be considered works of Geostrategy.

At the end of World War II, a different approach emerged within the global perspectives, that of the Conjugated Powers, which, as the name suggests, "*[considera] a*

[15] Shortly after the advent of flight, and its incorporation into the military during World War I, the concept of Air Power also emerged.
[16] See Annex A

existência de zonas com características dual [sic] (terra e mar) cujo controlo significaria um acréscimo de condições para se atingir [a primazia mundial][17]" (Dias, 2010:185). Within this line of thought two American political scientists can be particularly identified: Nicholas J. Spykman (1893-1943) and Saul Bernard Cohen.

Spykman (1944) argued that the key to global supremacy lay not in the control of the Heartland, or the Seas, but rather in controlling the Rimland[18] through a combination of land and Seapower. As such, it was in the United States' interest that no single power gained control over the Rimland, lest they then achieve the ability of isolating it from the Eurasian continent.

Though also a defender of conjugated powers, Cohen (1973) disagreed with Spykman's contention, as well as those of preceding geopolitical studies, raising the argument that the complete dominance over land, sea or air as a unitary avenue of movement would be impossible for a single power, given that, for instance, no sea based power can prevent a land power from establishing air or sea forces, or from carrying out land based attacks on sea forces and sea lanes (particularly in the age of missiles). According to Mendes Dias (2010), Cohen believed that world dominance was a fallacy, and that in reality the international system tended towards the equilibrium between two to three geostrategic regions, each in turn led by a superpower.

Saul Bernard Cohen (1973) made use of the term 'geostrategic regions'[19] to describe large segments of the world, determined by their location, the culture and/or ideology of its inhabitants, and the direction and flow of trade in each. Though a single unit as a whole, their composition is diverse and their unity is dependent on the control of strategic passages, both on land and on sea.

He further believed that geopolitical regions were subdivisions of the former, which expressed "*the unity of geographic features [and the] contiguity of location and*

[17] Translation by author: "*was [considered] the existence of areas with dual characteristics (land and sea) whose control meant an increase of conditions to achieve [global supremacy]*"
[18] See Annex A
[19] Cohen would later rename these to 'geostrategic realms' in his 2009 revision.

complementarity of resources [making these] the basis for the emergence of multiple power nodes within a geostrategic region" (Cohen, 1973:62).

Writing at the height of the Cold War, Cohen (1973) divides the world into two main geostrategic regions: *Trade-Dependent Maritime World*, led by the United States, and *The Heartland and Eastern Europe*, led by the Soviet Union. As a method of prospective analysis, he also recognized, what he deemed, "*The Indian Ocean Realm*" as a potential future geostrategic region. As shall be discussed further ahead, he would later revise his views on the layout of the world's geostrategic regions.

Further to this Cohen also highlighted the importance of 'shatterbelt' regions, more particularly the Middle East and Southeast Asia, which he defined as "*large, strategically located region[s] that [are] occupied by a number of conflicting states and [are] caught between the conflicting interests of adjoining Great Powers*" (1973:83). The location and overall political neutrality of the shatterbelts was strategically significant, as they served as footholds from which contending powers could either advance their influence or, conversely, block the advancement of their rivals.

While Cohen has since revised Southeast Asia's status as a shatterbelt region, Bateman argues that the given that China and India's interests overlap in the region, "*in the future [it] may be the focus of strategic competition between the two countries*" (2010:108).

1.2 GEOPOLITICS AND GEOSTRATEGY: CONTEMPORARY UNDERSTANDING

Mendes Dias (2010) and Martins (1996) explain that Geopolitics can be understood at different scales – local, State level or Regional/Global – and helps to delineate strategic Political objectives.

O'Callaghan defines Geopolitics as "*the study of the influence of geographical factors on state behaviour – how location, climate, natural resources, population and physical terrain determine a state's foreign policy options and its position in the hierarchy of states*" (2005:308), a view further complimented by Lara who argues that it "*interessa-se directamente pelas disputas de poder no espaço mundial e analisa em particular as*

condicionantes específicas dos poderes militares, marítimos, terrestres e aéreos[20]" (2009:171).

This brings us back to the earlier note that geopolitics is often confused with geostrategy, particularly in the context of international conflicts or the rivalries between States for the control of territory, population, resources and/or their respective transportation routes. Pezarat Correia (2008) argues that while both have similar approaches, they are distinguishable in their objectives: Geopolitics serves Political Science, making it more insightful and analytical, and is aimed at defining models of power; Geostrategy on the other hand serves Strategy, making it more dynamic and instrumental, aimed at creating and/or analysing models of evaluation and forms of coercion.

While recognising the validity of the observations above, particularly regarding the (mis)use of both terms, we find that this particular notion of geostrategy to be narrowed to the military domain. Martins further refines the definition by describing it as:

> *[O] estudo das relações entre os problemas estratégicos e os factores geográficos, à escala regional ou mundial, procurando deduzir a influência dos factos geopolíticos (económicos, demográficos, sociais, etc) nas situações estratégicas e na consececução dos respectivos objectivos. Constitui uma forma específica de interpretar a fenomenologia política, particularmente vocacionada para a percepção e análise de conflitos (actuais e potenciais) bem como dos comportamentos nesses conflitos*[21] (Martins, 1996:36).

An alternative view, advocated by Grygiel (2006), suggests that Geography, Geopolitics, and Geostrategy constitute three layers of the international arena, each moving

[20] Translation by author: "*concerns itself directly with power struggles over the world space and, in particular, analyses the specific conditionings of continental, maritime and airborne military powers*".
[21] Translation by author: "[T]*he study of relationships between strategic issues and geographical factors, at a regional or global scale, aimed at the deduction of the influence of geopolitical facts (economic, demographic, social, etc.) on strategic situations and the achievement of their objectives. It constitutes a specific way of interpreting political phenomenology, particularly focused on the perception and analysis of conflicts (existing and potential) as well as behaviours in these conflicts*"

at different speeds and which all figure in the calculations of States' foreign policies. Unlike the preceding perspectives, Grygiel describes geopolitics and geostrategy not as methods of study but rather as observable dynamics of human interaction with geography.

He explains that, Geopolitics can be understood as the result of the interaction of technology and geography, thus assigning value to the economic, political, and strategic importance of locations, which describes the changing geographic layout of communication routes and of resources, which are vital to the national interests of States. On this note, and working on the assumption that States have limited resources, he defines Geostrategy as:

> *"[T]he geographic direction of a state's foreign policy, [that] describes where a state concentrates its efforts by projecting military power and directing diplomatic activity. (…) Geostrategy describes this foreign-policy thrust of a state and does not deal with motivations or decision-making processes. The geostrategy of a state, therefore, (…) is an interpretation and a response to geopolitics and is not determined by it" (2006:22-23).*

Finally, while not delving into the concept of geostrategy itself, Cohen's recent revision of his theory argues that the present day World can be divided into three geostrategic realms: "*the Atlantic and Pacific Trade-Dependent Maritime Realm; the Eurasian Continental Russian Heartland; and mixed Continental-Maritime East Asia*" (2009:37). Of particular note, he further explains that the latter's emergence is mostly due to China's unprecedented economic growth over the last three decades, facilitated in turn by the resurgence of its maritime south and central coastal regions.

Still on the path of becoming a geostrategic realm in its own right, Cohen argues that *"the independent geopolitical region of South Asia has risen to geopolitical prominence because of the emergence of India as a major power and U.S. dependence on Pakistan in the war in Afghanistan*" (2009:6-7).

Though Southeast Asia's status as a shatterbelt has since changed (Cohen, 2009), its relevance as a geopolitical region is still important to answering the main question of this study, as we shall see further ahead.

While this study will not make use of the term geostrategic realm or geopolitical region, Cohen's contributions are valuable as they help delineate the strategic importance of geographic regions, locations and/or formations, and highlight how culture, politics and economy can characterise these, at larger or smaller regional scales. This will be particularly useful in analysing the importance of the South China Sea and the Indian Ocean Region to both China and India.

Further to all this, it is the contention of this study that Geopolitics can be understood as an analytical method, used by academics and statesmen alike, to study and highlight the distribution of Power and resources at a particular geographic scale, either local, regional or global. On this note, a geopolitical context can be described as the result of the various cultural, political and economic interactions between a number of actors, who are either located or hold interests in a specific geographic region.

Geostrategy in turn can be understood as either:

1. An analytical method, used by academics and statesmen alike, to analyse and/or evaluate a State or group of States' ability to project Power in an existing/potential geopolitical context; or,

2. The strategic convergence of a State's resources towards a specific geographic location (i.e. a country or a region) and/or geographic domain (i.e. continental, maritime or aerospace) vital to its interests, under a particular geopolitical context, expressed in the form of power projection, either through its military forces and/or diplomatic activity.

For the purpose of clarity, unless expressed otherwise, from this point on, this study will resort to the second segment of this concept when referring to Geostrategy.

Before establishing a concept for Maritime Geostrategy, it is useful to highlight the observations made at the beginning of this study, concerning the relationship between Geostrategy and Power. Based on this, it can be inferred that maritime geostrategy shares the same relationships with the concept of Sea Power. As such, in order to establish the best understanding of maritime geostrategy possible, it is necessary that a strong understanding of Sea Power and its purpose be established first.

1.3 SEA POWER AND MARITIME GEOSTRATEGY

1.3.1 Mahan: Elements of Sea Power

As observed above, much of the contemporary thought and writing on all matters related to the influence of the sea on politics can be traced to the writings of the American Admiral Alfred Thayer Mahan. His naval background aside, the Admiral's views on the importance of the sea are perhaps unsurprising given his perception of it as a "*great highway; or better (…) a wide common, over which men may pass in all directions, but on which some well-worn paths show that controlling reasons have led them to choose certain lines of travel rather than others*" (1890:25). Deeming the latter as trade routes, their importance to maritime commerce is prevalent throughout Mahan's writings, and is central to his assertion on the need for Sea Power.

Although Mahan coined the term Sea Power, he failed to provide a clear definition for it (Till,2009); however, in "The Influence of Sea Power upon History 1660-1783", he does explain that while its history is largely a military one:

> "*[Sea Power] includes not only the military strength afloat, that rules the sea or any part of it by force of arms, but also the peaceful commerce and shipping from which alone a military fleet naturally and healthfully spring, and on which it securely rests*" (1890:28).

Despite this contention, Mahan believed that Sea Power was ultimately expressed through naval capabilities and the ability to exert control over trade routes that comprised

the great common. He also believed that the build-up and sustainability of Sea Power rested on whether a nation possessed and, more importantly, made good use of a number of geographic and socio-economic conditions that he named the Elements of Sea Power (EoS).

Identifying whether China and India possess and make use of these elements is important to the objective of this study, as it will help determine whether both nations have the potential to influence/control events at Sea. As it is not in the interest of this study to conduct an exhaustive analysis of these elements, these will be focused on in clusters, highlighting the key points in each.

Geographical Position, Physical Conformation and Extent of Territory

Raising the argument that the geographical position of nations strongly influences their decision making, Mahan suggests that insular nations, and/or those which have secured the defence of their land borders, have an advantage over other nations where the development of maritime assets are concerned. This is particularly noteworthy, given that China and India maintain land border disputes with one another since 1949 (CIA, 2014; Globalsecurity.com, 2014).

He further explains that a nation's "*position may be such as of itself to promote a concentration, [or] dispersion, of the naval forces*" (1890:29), which can work as an advantage or a weakness to the State, depending on the success and growth of its merchant fleet.

Mahan further counts the proximity and access to open seas as a strategic advantage over other nations, particularly if within controllable reach of "*one of the great thoroughfares of the world's traffic*" (1890:32). However, he cautions that the control of certain key points, like straits and islands, by foreign powers can severely undermine the projection of naval power in the nation's respective region and, under the right circumstances, to the open sea. These points are particularly relevant to China and India, given that the former's access to the open oceans is 'constrained' by a number of archipelagos (O'Rourke, 2012) whereas the latter enjoys open access to the Indian Ocean (Sakhuja, 2011).

Arguing in favour on the control of key strategic locations, this last point is strongly tied to Mahan's suggestion that in order to secure the strategic supremacy over key geographic points, distant from a nation's own shores, the establishment of forward bases of operations (i. e. colonies or colonial posts) must be made. Once again, this point can be related to China and India, given the that the former is currently investing in a number of port development/construction projects throughout the IOR (O'Rourke, 2012, Mohan, 2010), and that the latter holds islands strategically located near the Strait of Malacca (Rocha, 2013), a key strait where global maritime trade is concerned (Scott, 2013).

Regarding the physical conformation of a sea bordering nation, Mahan explains that the existence of natural harbours is key, given that a country "*[with] a long seaboard, but entirely without harbour, (…) can have no sea trade of its own, no shipping, no navy*" (1890:35). However, Mahan is careful to point out that natural harbours are also a source of vulnerability, when poorly defended, serving as a means of access to the nation.

Despite the importance of a nation's coastline and its ease of access to the open seas, Mahan also argues that, in many ways, it is the inherent geography of each nation that determines its seafaring nature[22]. Linked to this last condition is the extent of territory, in which Mahan explains that, coupled with the (non-)existence of natural harbours, the length of the nation's coastline also plays a significant role in increasing or diminishing a nation's Sea Power, depending on the amount of population able of manning and protecting it, given that "*[a] country is in this like a fortress; the garrison must be proportioned to the [enclosure]*" (1890:43).

While the last point may no longer be as applicable in current times, in the age of long range surveillance systems and advanced engineering (where port construction is concerned)[23], the extent of a nation's coastline should still bear weight, as a source of

[22] Analysing the cases of England, France and The Netherlands, he points out that in France's case, due to the vast expanse and richness of its land, it wanted for little and had little appetite for exploring riches abroad, whereas England and The Netherlands, due to their poor internal productivity were forced to seek raw materials abroad, and establish colonies to guarantee their constant income.

[23] On this note, and somewhat prophetically, Mahan does concede that the no amount of geographic and demographic advantages would serve much use in an age of the growing technological advancement and increasingly destructive of weaponry.

multiple potential access points to the seas. As both China and India have extensive coastlines, this element will be taken into consideration.

Number of Population, National Character and Character of Government

Following on from the last point, Mahan is careful to point out that, where Sea Power is concerned, a nation's total population and economic strength are only important insofar as the percentage associated with or allocated to the maritime sector, industry and Navy. As shall be seen further ahead, while China outweighs India considerably in terms of maritime industry, both nations have consistently increased their investment in the maritime sector and the allocation of budget to the modernisation of their navies.

More importantly however, and regardless of economic strength, Mahan identifies the character of governance as the guiding force that drives a nation on the path to success or failure. Where Sea Power is concerned, he distinguishes how governments can influence nations in time of Peace or War. He further argues that:

> *More importantly even than the size of the navy is the question of [the nation's] institutions (…) providing for rapid development in time of war by an adequate reserve of men and of ships and by measures for drawing out that general reserve power [mentioned earlier] when considering the character and pursuits of the people* (Mahan, 1890:82).

Reiterating the importance of 'forward bases of operations', Mahan further explains that securing naval stations:

> *(…) in those distant parts of the world to which the armed shipping must follow the peaceful vessels of commerce (…) would be one of the first duties of a government proposing to itself the development of the [nation's Sea Power]* (1890:82-83).

This clearly points to a nation's maritime strategic doctrine where, once again, China and India differ significantly, with the latter experiencing much more difficulties between its naval planners and advisors, and the ruling elite, as shall be discussed further ahead (Prakash, 2013).

Mahan's analysis is useful, as it allows for the enumeration of the elements that form the base of a nation's Sea Power, and provide a guide of how these elements may be put to said nation's use. It is unsurprising that Mahan's teachings remain to this day as a source of mandatory study for such navies like the USN, IN and PLAN (Mohan, 2009b).

However, as pointed out by Holmes (2010), while Mahan's teachings became popular and the focus of deep studies within the Chinese Naval sphere, the latter also recognized the value of other the contributors to Naval Strategic theory, such as those of the naval historian Sir Julian Corbett.

1.3.2 Corbett: Command of the Sea

In "Some Principles of Maritime Strategy" (1911), Corbett asserts that the objective of Naval warfare is often understood to "*be directly or indirectly either to secure the command of the sea or to prevent the enemy from securing it*" (2004:87). While not contending the veracity of the statement, Corbett points out to the danger of its misinterpretation, raising the argument that the Command of the Sea (CoS) is first and foremost an objective, and not a status to be gained or lost. Similarly to Mahan, Corbett offers no specific concept for CoS; however, he does explain that in a situation of limited warfare, between two powers at sea, CoS is attained when one actor not only "*[isolates] the distant object, but also [renders] impossible the invasion of his home territory*" (1911:56).

He argues that even the most powerful of navies can be prevented from attaining (CoS), in a given region and situation, by a less powerful opponent and that the loss of the CoS by one actor does not mean the gain of CoS by another. In fact, "*(…) the most common situation in naval war is that neither side has the command; that the normal position is not a commanded sea, but an uncommanded sea*" (1911:87).

Corbett goes further by breaking down the understanding of CoS, distinguishing it from territorial conquer. Whereas in the former the conqueror gains effective control over all rights of land, with CoS the only right to be gained (outside of territorial waters) is that of passage[24].

Put simply, CoS acts as a barrier, not only to the SLOC of a given state but also to that State's ability to deny sea access to the enemy. The victor gains full access to the SLOC and the ability to exert military pressure over the other state's maritime needs. Therefore, Corbett argues that the main objective of naval warfare should be understood as "*the control of [maritime] communications (…) which are part of the life of a nation*" (1911:90), a notion that, as we have seen, is shared by Mahan.

Corbett further highlights the vitality of maritime communications by distinguishing the temporal aspects of economic pressure in land based warfare and naval based warfare. In the former, economic pressure only truly begins once victory is obtained, whereas the latter is felt at the outset of war.

Corbett wrote his thoughts at a time when global economic sanctions were not a primary tool against a particular state, however the validity of his strategic assertions still holds true. As shall be seen ahead, SLOC are currently vital to the stability of the global economy; their protection and/or potential disruption figures as an important concern in the security calculus of many nations dependent on their stability in order to sustain their economy (Till, 2012; Sakhuja, 2011).

According to Holmes (2011) that China has taken an interest in Corbett's theories has not gone unnoticed by the United States, the current supreme naval power. He argues that faced with the ever increasing pace of military modernisation of such countries like China and Iran, and their growing capability to deter adversaries in their respective neighbourhoods, where Naval operations are concerned the United States strategic planners and statesmen have too begun adopting a more 'Corbettian' approach, focusing on imposing

[24] See Annex A

"*local and temporary superiority at critical places on the map at critical times*" (2011: website).

Finally, given that Corbett focuses purely on strategic theory, and not necessarily on measureable elements such as Mahan, the validity of his observations still applies entirely to modern times. While Corbett makes no mention of Sea Power, his observations that the objective of naval warfare is to block or prevent SLOC from being blocked, align well with Mahan's arguments regarding the purpose of Sea Power.

However, as argued by Sakhuja (2011), Sea Power is a concept that is altered, both in perception and in content, by the advancements of technology and international maritime law. As such, in order to ensure an accurate understanding of Sea Power, in line with the time period to be analysed further ahead, it is important that more contemporary arguments for Sea Power be taken into account.

1.3.3 Contemporary arguments for Sea Power

Arguing in favour of a more military focused concept, Bull (1976) suggests that Sea Power "*(…) can most usefully be defined as military power that is brought to bear (…) on the surface of the sea, underneath it or in the air above it*" (1976:1). This can be understood as a modern version of the Mahanian outlook, given that land and air based powers can (and do) impact significantly on a nation's maritime assets. Ladwig (2012) would seem to agree with this point, according to whom:

> *Control of the sea*[25] *(…) as a fundamental prerequisite for both power projection and the protection of sea-lanes (…) is not sufficient for the more demanding mission of maritime power projection onshore, which can take two general forms: amphibious assault by ground troops and strikes by carrier aircraft and cruise missiles* (2012:31).

[25] Understood, in this instance, as the efficient and unobstructed ability to operate at sea, or in an ocean area, for a limited period.

However, Tangredi (2002) argues that the traditional Mahanian focus on the elements of naval strength and maritime warfare is no longer suitable in an age of ever growing globalization, calling instead for a renewed focus on Sea Power. Labelling Globalization and Global (Maritime) Trade as interdependent, he further argues that the control of international trade and commerce, and the ability to explore and use ocean resources, should figure much more highly in Sea Power calculations than they once did. With this in mind, Tangredi defines 'modern' Sea Power as:

> *[T]he combination of a nation state's capacity for international maritime commerce and utilization of oceanic resources, with its ability to project military power into the sea, for the purposes of sea and area control over commerce and conflict, and from the sea, in order to influence events on land by means of naval forces*[26] (2002:3).

In an intermediary position we find Sakhuja (2011), who argues that different terms should be used for different understandings and interpretations. Distinguishing Sea Power from Maritime Power, Sakhuja classifies the former as a nation with significant naval capabilities (ships, submarines, etc.) and the latter as a nation who makes use of maritime resources (natural and/or manmade) to enhance its position in power relations. He further explains that one need not necessarily follow the other.

While Till does not adopt the same differentiation, he agrees that Sea Power does not boil down to military maritime capabilities, arguing that not only is the term relative but that almost all countries have a degree of Sea Power to one extent or another, "(…) *the strategic effectiveness of [which] depends importantly on the strengths and weaknesses of whom it is exerted against (2009:22).* Hughes not only shares the same view but further compliments by explaining that *"(…) while India's Navy may have overwhelming strength against, say, Pakistan's, the distinction is not as clear when compared to China's"(2014a:7).*

[26] Section underscored for the purpose of this study.

According to Till (2009) one of the difficulties in defining Sea Power lies precisely with the 'power' aspect of the concept. He explains that some authors tend to focus on the 'inputs' (what makes a country a powerful, i.e. military, economy) and others chose to focus on the 'outputs' (in essence, what a country is capable of doing or having others do). Till's contention is that Sea Power has to be seen as both an input (navies, coast guards, maritime infrastructures and industries) and as an output (naval diplomacy and/or military coercion).

Given this, and for the purpose of this study, 'Sea Power' can be understood as the subcomponent of a State's national power, which can be measured through geographic, economic and military maritime assets, through which it can exert its influence, either at or from the Sea, on actors (States or others) whose interests collide with its own.

Furthermore, having established a concept for Sea Power, it will now be possible to develop a concept of maritime geostrategy.

1.3.4 Sea Power as a component of Maritime Geostrategy

Given that geostrategy implies the strategic convergence of a State's resources towards a specific geographic location and/or domain, it is clear that in defining maritime geostrategy the geographic domain in question is made self-evidentiary. However, where location is concerned, it has been established that specific locations at sea can hold vital importance for states, particularly where sea access or denial is concerned (Corbett, 1911; Mahan, 1890). Furthermore, given that a nation's geostrategy is expressed through its foreign policy, either in the form of military power projection and/or diplomatic activity, it can be argued that Sea Power reflects this component of geostrategy, based on the concept established above.

Given this, Maritime Geostrategy should be understood as the strategic convergence of a state's resources, towards the maritime domain and/or locations at sea considered vital to its interests, under a particular geopolitical context, in the form of power projection expressed through its Sea Power capabilities.

The purpose of Sea Power

According to Carvalho (1982) the use of the sea as a means of transport, both for military and commercial purposes, is a historically evidenced practice, dating back to the dawn of human civilization and, given the vulnerability of maritime transport on open water, both in times of war or peace, it is natural that States seek to safeguard their maritime interests through the increase of their Sea Power capabilities.

On this note, Sakhuja (2011) argues that the implementation of maritime sovereignty through international nautical regimes, such as the United Nations Convention on Law of the Sea (UNCLOS), along with the advancement of technology, have tied Sea Power and the economic dimension of National Security more closely than before. He further argues that:

> *Globalization [has had] an important impact on the [sea] power of states, even as states vie for trade and access to resources critical for their economies. The rapid pace of economic growth gulps enormous resources that are finite and have to be accessed and transported on the transoceanic routes (…).The global system is predominantly dependant on international [maritime] trade [thus] establishing a symbiotic relationship between globalization and [sea] power (…). [This] is evident in the foreign and domestic investment-driven innovation that has enabled several countries such as China and India into predominance of maritime activity"* (Sakhuja, 2011:5-7).

It can then be concluded that the security of the SLOC becomes a concern to most coastal (and some landlocked) states whose economies are intrinsically connected to the trade that transit through the oceans. As China and India constitute no exception to this, analysing their efforts to ensure their continued access to global SLOC, through the enhancement of their sea power capabilities, is essential to answering whether their

maritime geostrategies can potentially impact International Maritime Security in the medium term.

However, as a nation's Sea Power is ultimately relative to that of another, it stands to reason that China and India's sea power is only capable of impacting maritime security so far as such actions do not go against the interests of an actor whose Sea Power is greater than theirs (i.e. United States). As such, in order to determine whether either country truly can affect International Maritime Security, in the medium term, it is essential that a more accurate understanding of their Sea Power potential be established.

Calculating Sea Power Potential

Though useful, the understanding of the concept alone is insufficient to accurately ascertain a nation's Sea Power capabilities. To that end, similarly to Almeida's (1990) endeavour of adapting Ray S. Cline's (1977) equation for the assessment of nations' perceived power levels, to a more simplified version, Sakhuja provides the following alternative for perceived Sea Power potential:

$$\mathbf{SP} = (\mathbf{G} + \mathbf{E} + \mathbf{M} + \mathbf{T})\ (\mathbf{S} + \mathbf{W})$$

The equation stipulates that a nation's perceived Sea Power (**SP**) is equal to the sum of its maritime **G**eography (location, coastline, island territories, Exclusive Economic Zone (EEZ), overseas bases, etc), **E**conomic strength (merchant shipping, fishing industry, maritime natural resources, etc.) and **M**ilitary and **T**echnological capabilities (naval forces, land and sea-based coastal defence, space based reconnaissance, information technologies, etc.), multiplied by the sum of its maritime **S**trategic doctrine and national **W**ill, represented in turn by the "*national leadership and relevance of maritime strategy to national interests*" (Sakhuja, 2011:23).

While it is noteworthy that all variables can be directly linked to Mahan's EoS, it is also important to point out that these variables are subjective (G, E, M and T), or otherwise intangible (S and W) (Sakhuja, 2011). The subjectivity of these variables implies that

obtaining an exact value for a nation's Sea Power potential is impossible and that the result itself should only be used as a guide.

Given this, in order to ensure the utmost accuracy possible, it is essential that each variable take into account as much data, in this case as many EoS, that comprise its nature. To that end, each variable will be comprised of a cluster of EoS, based on Mahan's writings as observed above, but also taking into account elements that were inexistent at the time, such as the EEZ, and specific naval vessels such as Aircraft Carriers and Submarines. More specifically:

Geography will be comprised of Land Area, Length of Coast and EEZ; **E**conomic strength will factor the Number of (merchant) Ships, Dead-weight Tonnage (as a percentage of the world total), and GDP; **M**ilitary capabilities will take into account the number of Aircraft Carriers, Strategic Submarines, Tactical Submarines, Naval Aircraft, and Naval Personnel; and, finally, **T**echnology will be represented by each nation's Defence expenditure.

While it is possible to add more elements to each variable, those chosen above were done so based on the ease of their quantifiability, and their correlation with the maritime domain. How these will be used to calculate China and India's Sea Power potential will be discussed in detail in Chapter 2.

However, before proceeding with the analysis of how International Maritime Security can be impacted by China and India's maritime geostrategies, it is not only important that a firm understanding of what is meant by it be established, but also how it can be impacted by States.

1.4 FROM SECURITY TO (INTERNATIONAL) MARITIME SECURITY

1.4.1 Contributions from the Realist and Pluralist Perspectives

According to Rahman (2009), because most theorizing about security has not focused on its maritime dimension, it is essential to place the conceptualisation of maritime security within the context of the wider security debate.

Much like Geopolitics and Geostrategy, despite the overwhelming focus placed on Security in the context and its study in International Relations (hereafter referred to as Security Studies), no universally accepted definition for the term has yet been reached. In fact, Helga Haftendorn argues that "*there is no one concept of security; "National security," "International Security," and "Global security" refer to different sets of issues and have their origins in different historical and philosophical contexts*" (1991:3).

Contributions from the Realist paradigm of International Relations[27], encourage us to see the World as an anarchic stage (Prakash, 2010; Hough, 2004), in which all States mistrust and/or misperceive each other's actions/intentions and, therefore, seek to secure themselves by strengthening their own Power, often under the guise of National Security or Interests (Buzan & Hansen, 2009; Cravinho, 2006; Baldwin, 1997; Ullman, 1983). The challenge that arises from one state's pursuit to maximize its Power is that it is likely to be done at the expense of others, which in turn will seek to maximize their own, creating a cycle that has been termed the 'Security Dilemma' (Haftendron, 1991; Walt, 1985).

As observed above, some authors (Till, 2012; Kaplan, 2009) believe that such a security dilemma is evident in Southeast Asia today and Storey explains that despite the economic benefits enjoyed regionally from the PRC's economic boom, "*[it's] growing military power has aroused concern across the region [given its] increasingly assertive behaviour in the South China Sea*" (2012:287).

The most supported solution to security dilemmas, advanced by Realists, is the balance of powers, in which weaker states balance against the most powerful in order to ensure stability of the system and their own independence (Buzan & Hansen, 2009; Hough, 2004). Walt (1985) argues that a more accurate notion is that States balance against those they perceive as most threatening to their interests, and not necessarily against the most powerful.

[27] The traditional approach to Security and considered by many as the view adopted by most statesmen.

Such practices are evident in East and Southeast Asia today. According to Cohen (2009), ever since Southeast Asia lost its Shatterbelt status at the end of the Cold War, power plays have emerged in the region, where China struggles for influence against such states as South Korea, Japan and the United States. More recently, India too has turned its focus to Southeast Asia, strengthening and/or establishing defence ties with countries such as the Phillipines, Vietnam and Japan, in what some suggest as a counterbalancing move towards China's growing influence in the region (Scott, 2013).

On the other hand, contributions from the Pluralist and Marxist paradigms of International Relations (Hough, 2004; Buzan, Wæver & Wilde, 1998; Ullman, 1983) argue that the Realist approach to Security is too narrow-minded, with the brunt of the focus placed on military threats to national security rather than non-military threats, such as economic, environmental, organized crime, health and humanitarian related issues that can heavily affect a nation. This bears some consideration as it has already been observed that, given that SLOC serve as lifelines to many nations' economies (Sakhuja, 2011; Corbett, 1911) a disruption to these need not necessarily come from another state in order to cause damage. As shall be seen further ahead, threats to the SLOC such as maritime piracy and terrorism are a reality to be contended with in the IOR and Southeast Asia.

As such, when establishing a concept for International Maritime Security, it is important that this study also take into account the existence of non-state threats and their potential impact on it.

Furthermore, given that China and India's efforts to address and/or counter non-state threats can equally have the potential of contributing to a maritime security dilemma, these will also need to be accounted for in the analysis of their respective geostrategies.

1.4.2 Defining Maritime Security

Where the conceptualisation of security is concerned, Ullman advances the argument that:

> *[I]t is necessary to recognize that security may be defined not merely as a goal but as a consequence – this means that we may not realize what it is or how important it is until we are threatened with losing it. In some sense, therefore, security is defined and valorised by the threats which challenge it* (1983:133).

As a concept for Maritime Security, Chauhan seems to meet the criteria established above, as he defines it as the "(…) *freedom from threats arising either 'in' or 'from' the sea [whether] from natural causes or man-made ones, or from the interplay of one with the other, as in the case of global warming and environmental degradation*" (2010:200).

However, Buzan, Wæver & Wilde's (1998) approach to establishing a concept of security compliments Ullman's, as it recognizes that:

> *"Threats and vulnerabilities can arise in many different areas, military and non-military, but to count as security issues they have to meet strictly defined criteria that distinguish [them] as existential threats to a referent object by a securitizing actor who thereby generates endorsement of emergency measures beyond rules that would otherwise bind"* (1998:5).

Further to this, it is clear that Chauhan's definition fails to meet the above mentioned criteria of being referent to a specific object. In other words, while it delineates exactly which threats should be focused on, it fails to specify what exactly is being threatened. It is also worth pointing out that, where the conceptualisation of security is concerned, Baldwin cautions against the use of terms such as 'freedom from threats', arguing that when otherwise unchecked, they suggest an indefinite period of security, which he argues is impossible precisely due to the existence of non-human threats, such as natural disasters.

On that note, and for the purpose of this dissertation, Maritime Security should be understood as the state of significantly reduced and mitigatable threats, either directed at or originating from the sea, whether natural or human made, to all maritime assets either

transiting the oceans (commercial and naval vessels) or stationed on them (such as oil rigs), and also coastal states. Moreover, any efforts undertaken by a particular nation, or group of nations, to mitigate or counter the threats described above, should be considered as Maritime Security measures.

Energy Security as part of Maritime Security

Cai explains that closely linked to Maritime Security is the notion of Energy Security, which "*[links] security and access to energy resources [and] is therefore closely related with the availability of domestic or local and international resources and cannot be separated from the issue of potential or possible disruption of energy-import supplies*" (2010:73).

As shall be seen further ahead, in order to sustain their growing economies, China and India rely heavily on imported energy resources, over 80% of which are sea borne (EIA, 2014a; EIA, 2014b). Furthermore, the SLOC on which these energy resources transit are considered some of the most vulnerable in the world, not only due to high levels of piracy but also as they are located close to suspected hubs of terrorist organisations (Rigby, 2013; O'Rourke, 2013).

The existence and persistence of such threats can be seen as a clear motivation for the modernization of China and India's naval forces. Other authors believe that the desire to establish modern and advanced sea going navies, commensurate with their growing status, could be the main driver behind China and India's naval modernisation.

Regardless, it is important to note that, when not undertaken in consonance with other states, any measures implemented by one state to prevent or counter maritime threats have the potential to alarm other states and lead these to build-up maritime security measures themselves (Till, 2012), particularly where those in question are suspicious of one another, such as the case with China, regarding many of the East and Southeast Asian states, and India, regarding Pakistan and Bangladesh (Hughes, 2013). As has already been established, this has the potential of resulting in a security dilemma.

1.4.3 International Maritime Security

According to Haftendorn, the notion of International Security implies that "*States are interdependent in their security affairs such that the security of one is strongly affected by the actions of the other, and vice versa* (1991:9). Further to this. Tangredi explains that since:

> "*(…) over 90 percent of international trade travels by sea (…) the dependence of the global economy on maritime transport is hardly remarked upon because, like oxygen, its existence is primarily evident in its absence. (...) Clearly, any substantial interference on seaborne commerce would thus have a severe effect on the global economy*" (2002:xxvi).

As such, any disruptions to the SLOC (for instance, from a blockade of a strategic passage by a nation's naval forces, or in the form of piracy attacks on commercial vessels), constitute potential threats, not only to the vessels that transit the SLOC, but also to the States whose economies are dependent on the stability of these sea lanes. Furthermore, given the interconnectedness of global trade, such disruptions would affect various states simultaneously and thus have an international impact.

On that note, and for the purpose of this dissertation, International Maritime Security should be understood as the state of significantly reduced threats, whether natural or human made, capable of disrupting the flow of global maritime trade.

As such, while the individual actions of a state to counter any maritime threats should not be discounted as Maritime Security measures, these must be recognised as having the potential to destabilise International Maritime Security. Furthermore, given that such actions or a State's pursuit to increase its capabilities in doing so, are equatable with sea power, a component of maritime geostrategy, it stands to reason that the maritime geostrategies of states can in fact impact on International Maritime Security.

1.5 SUMMARY

In sum, it can be determined that the geostrategies of nations reflect not only the geographic direction towards which their national interests lie but also the means they are willing to commit in order to ensure their continued access to these (Pezarat Correia, 2009; Grygiel, 2006).

Where Maritime Geostrategy is concerned, understanding the concept Sea Power is important, not only as it represents the maritime subcomponent of a State's National Power, used to project its influence at or from the sea on those whose interests go against its own, but also because it is ultimately relative to that of another. As such, States who seek to prevent the possibility of being denied access to SLOC, naturally seek to increase their Sea Power capabilities (Till, 2012; Sakhuja, 2011;Tangredi, 2002).

However, the pursuit of increased Sea Power capabilities has the adverse effect of leading other actors, whether neighbouring states or those with vested interests in the region, to question the underlying motives for such a build-up and, in turn, to enhance their own Sea Power capabilities, creating a security dilemma as a result (Prakash, 2010; Walt, 1991).

This is important to answering the lead question of this study, given that Sea Power is a component of Maritime Geostrategy, and thus a nation's pursuit to increase its sea power capabilities has the potential of impacting International Maritime Security. Nevertheless, a nation's ability to do so is ultimately limited to the relativity of its sea power potential to that of an actor whose interests collide with its own (Hughes, 2013; Till, 2012). On this note, a more accurate idea of a nation's Sea Power potential can be obtained through the use of Sakhuja's Sea Power calculus formula.

Given this, after providing a brief description of the geopolitical context under study, the next chapter will seek to establish an accurate idea of China and India's Sea Power potential, by identifying and measuring the modern equivalent of Mahan's EoS for both nations against those of the United States, as the latter is considered the global leader in

terms of Sea Power capabilities. Furthermore, it will also identify existing trends in order to ascertain its potential up to 2030.

Once this has been established, China and India's current maritime geostrategies will be outlined, by identifying the geographic direction towards which their core national interests lie and the means employed to secure these. Furthermore, potential and existing maritime threats, perceived by both China and India, will be identified along with the measures employed by both to address and/or counter such threats. These measures will then be analysed and, taking into consideration how they can potentially influence International Maritime Security in the medium term.

2 CHINA AND INDIA

Though this chapter will explore in detail the geopolitical context in which China and India's maritime geostrategies are based, it is useful to provide a brief summary of the situation, in order to facilitate its understanding.

As the world's fastest growing economies, and its largest energy consumers as of 2013 (EIA, 2014c), China and India have grown increasingly dependent on the shipping industry to sustain their economic development. As such, threats to SLOC figure highly in both nations security concerns, regardless of whether these originate from the Navies of other nations, or from non-state actors in the form of maritime piracy and/or terrorism (Hughes, 2013; Till, 2012; Mohan, 2010).

However, despite holding strong economic ties, China and India are seen as rivals (Sakhuja, 2011; Bahl, 2010), both seeking to establish their influence and secure access to vital energy and other natural resources (Cheru & Obi, 2010). They have also grown increasingly suspicious of each other's naval advancements into their respective maritime neighbourhoods, particularly as both actively invest in the modernisation of their navies (IISS, 2014), in order to safeguard their maritime interests and project their power and influence from beyond their shores.

Where India is concerned, these suspicions can be traced back to its defeat against China in the Sino-Indian war in 1962 (Prakash, 2011), and are further exacerbated by China's alliance with Pakistan, expressed through the supply of defence cooperation and the development of strategic infrastructure such as the Gwadar port (Hughes, 2014c). The Chinese construction of other naval bases in strategic locations surrounding India's maritime access to the Persian Gulf and South China Sea are also a cause for concern.

Conversely, China's wariness of India has increased along with the latter's growing relationship with the United States (Hughes, 2014b). As the strongest regional actors within the IOR, China views an Indo-American alliance as a potential threat to its access to the Persian Gulf, on which China relies heavily for energy security. Furthermore, India's recent

port calls and naval exercises with actors in East and Southeast Asia, such as Japan, the Philippines and Vietnam (Pollman, 2015; Pillalamarri, 2014), are also seen as a cause for concern, given China's maritime disputes in the region.

Though the environment isn't one of conflict, against the backdrop of growing economic rivalry and wariness over each other's' intentions, the potential for a clash and/or conflict between both seems to be increasing.

2.1 SEA POWER: ELEMENTS AND OBSERVABLE TRENDS

As observed in Part I, a nation's Sea Power is subjective and dependent on a number of factors that go beyond its naval capabilities. As such, and further to the analysis of Mahan's teachings, this next section will endeavour to list and categorise China and India's EoS, in order to evaluate their Sea Power potential, which will help establish their capabilities of impacting International Maritime Security, as discussed in Part I.

At the end of this section, and resorting to Sakhuja's equation for perceived Sea Power, each nation's elements will be factored against those of the United States, in order to gauge where they stand in comparison.

2.1.1 Geographic Elements

According to Fernandes, "*um estudo geoplítico implica necessariamente uma introdução geográfica, enquadradora dos parâmetros geomorfológicos e humanos que influenciam a área observada*[28]" (1998:13). As such, we will begin this section by rendering China and India's respective geographic portraits, with a particular focus on the maritime domain.

Geographic Position

Starting with the PRC, situated at the far east of the Eurasian continental block (Figure 1), as an elongated landmass, its total area is approximately 9.6 million km^2; with a

[28] Translation by author: "*a geopolitical study necessarily implies an introductory geographical framework, of the geomorphological and human parameters that influence the observed area*".

22,117km long land boundary which borders a total of fourteen nations. With a 14,500km long coastline, it is also bordered by the South and East China Seas, the Yellow Sea and the Korea Bay, providing it with strategic and short distance access to all countries bordering these waters, and thus holding a central position within Southeast Asia.

Turning our focus to South Asia (Figure 1), the Indian subcontinent appears as a triangular shaped peninsula, located at the southern centre of the Asian landmass and the northern centre of the Indian Ocean. With an overall area of roughly 3.3 million km^2, India's land border is 13,888 km long, bordering a total of six nations. On a maritime dimension, India's 7,500km long coastline is divided "*(…) between the Arabian Sea [to its West] and Bay of Bengal [to its East], the two largest bodies of water in the Indian Ocean*" (Sakhuja, 2011:56). This places India within strategic access to the Arabian Gulf and the East African Coastline, as well as Southeast Asia to its west, and the SLOC that connect these two regions. Furthermore, India holds sovereignty over the Andaman and Nicobar archipelagos on the eastern most part of the Bay of Bengal, and west of the Strait of Malacca (Rocha, 2013).

Having already established the maritime strategic advantages of India's geographic location, it is important to note that despite the length of its coastline "(…) *China does not border an ocean except east of Taiwan where the waters of the Pacific Ocean wash its shores*" (Sakhuja, 2011:55). However, the waters of its bordering seas are home to a large percentage of global merchant and energy resource shipping, making these SLOC some of the most important in the world (O'Rourke, 2012).

Figure 1 - Political Map of Central, South and East Asia

Source: http://maps.google.com

Security of Borders

China and India share a land boundary of 3,380km, and still maintain territorial disputes along its length (CIA, 2014). The border disputes date to the establishment of the PRC in 1949 and ultimately led to the Indo-Sino war of 1962, of which China emerged victorious (Globalsecurity.org, 2015). Furthermore, "*[t]he Sino-India border remains the only major territorial dispute, other than South China Sea disputes, that China has not resolved*" (Globalsecurity.org, 2015: website).

Figure 2 - Indo-Sino Border Disputes

Source: Library of Congress Geography and Map Division Washington, 2002

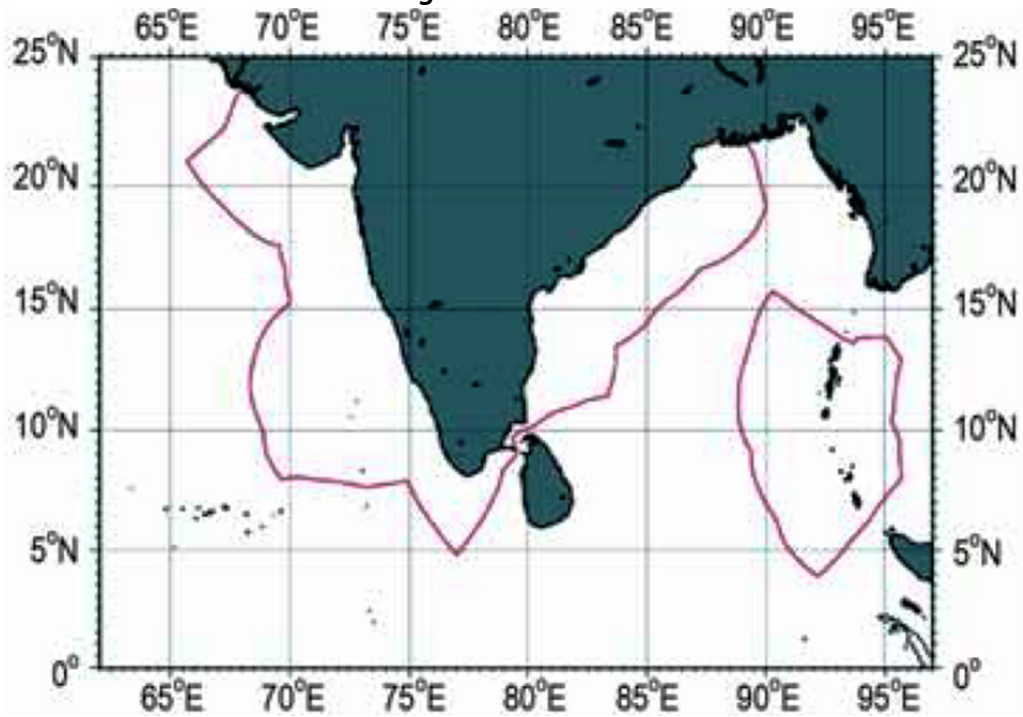
Points of Access Denial

Sakhuja argues that, of equally high strategic importance to China's maritime interests are the waterways that surround the above mentioned bodies of water, namely "*[the] Straits [sic] of Malacca, Sunda Strait, Lombok Strait, Ombai Wetter Strait, Makassar Strait, Torres Strait and Taiwan Strait*" (2011:55) of which the Strait of Malacca is the most important. This importance is reflected in Corbett's (1911) observations on the importance

of geographic location in naval warfare and how it can be used to a nation's advantage or detriment.

As a rectifier of the 1982 UNCLOS[29], India's coastline offers it an extensive EEZ that covers approximately 1,6 million km^2 (Seaaroundus.org, 2014) and, despite having recently reached an accord over its maritime disputes with Bangladesh (Herbert Smith Freehills LLP, 2014: website)[30], it still maintains maritime territorial disputes on its Western coast with Pakistan (Rocha, 2013).

Figure 3 - India's EEZ



Source: IHMDN (2007)

Forward/Overseas Bases of Operation

India's EEZ, however, isn't solely restricted to its continental coastline. As Khurana points out, "*owing to its long 7,500km of coastline (…) and widespread island territories, India is bestowed with sovereign jurisdiction over an extensive EEZ of 2,3 million sq km* (…)"

[29] India ratified the 1982 UNCLOS on 29 June 1995.

[30] On 7 July 2014, an Arbitral Tribunal constituted under Annex VII of the United Nations Convention on the Law of the Sea 1982 issued its award in the Bay of Bengal Maritime Boundary Arbitration between the People's Republic of Bangladesh and the Republic of India, granting approximately 106,613km2 to Bangladesh and 300,220 km^2 to India, out of a total relevant area of 406,833km2. Both parties have welcomed the award

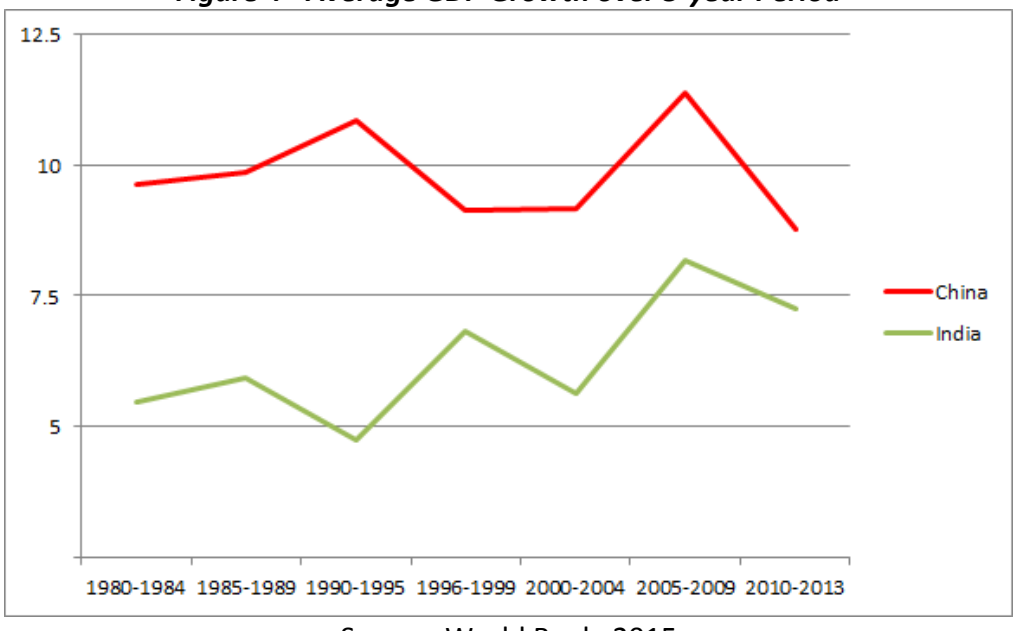
(2007:584). On the subject of its island possessions, and in addition to the extended EEZ, Rocha highlights the particular "*importance of the Lakshadween and Andaman and Nicobar Islands as far as maritime geopolitics is concerned, [given] the possibility of being used as forward military bases for power projection*" (2013:65).

2.1.2 Socio-Economic Elements

Economic and Demographic Trends

According to Morrison, following the implementation of Den Xiaoping's economic reforms in the late 1970's, "*China's average annual real GDP has grown by nearly 10% [doubling] the size of its economy in real terms every eight years*" (2014:3). Similarly, following its financial collapse at the end of the 1980's, India overhauled its economic and foreign policies, veering towards higher economic liberalisation and diplomatic engagement with the United States and China, and strengthening relations with Southeast Asia (Robinson, 2011; Bahl, 2010). Since then, India's average annual GDP growth rate has hovered at around seven per cent (Figure 4).

Figure 4 - Average GDP Growth over 5-year Period



Source: World Bank, 2015

As of late 2014, China and India rank as the World's second and ninth largest economies respectively (CEBR, 2014). According to a forecast by Standard Chartered Bank

(SCB), India will have risen to the fifth position by 2020 and third by 2030, at which point China will be the largest economy in the world (SCB, 2013).

Table 1 – The 10 Largest Economies by Decade

	1990	USD tn	2000	USD tn	2010	USD tn	2020	USD tn	2030	USD tn
1	US	5.9	US	10.3	US	15.0	US	23.5	China	53.8
2	Japan	3.1	Japan	4.7	China	5.9	China	21.9	US	38.5
3	Germany	1.7	Germany	1.9	Japan	5.5	Japan	6.1	India	15.0
4	France	1.2	UK	1.5	Germany	3.3	Germany	5.1	Japan	9.3
5	Italy	1.1	France	1.3	France	2.5	India	4.5	Germany	7.4
6	UK	1.0	China	1.2	UK	2.3	Brazil	3.9	Brazil	6.3
7	Canada	0.6	Italy	1.1	Italy	2.0	France	3.9	UK	5.8
8	Spain	0.5	Canada	0.7	Brazil	2.1	UK	3.7	France	5.7
9	Brazil	0.5	Brazil	0.6	Canada	1.6	Italy	2.7	Indonesia	4.7
10	China	0.4	Mexico	0.6	Russia	1.5	Russia	2.6	Russia	4.6

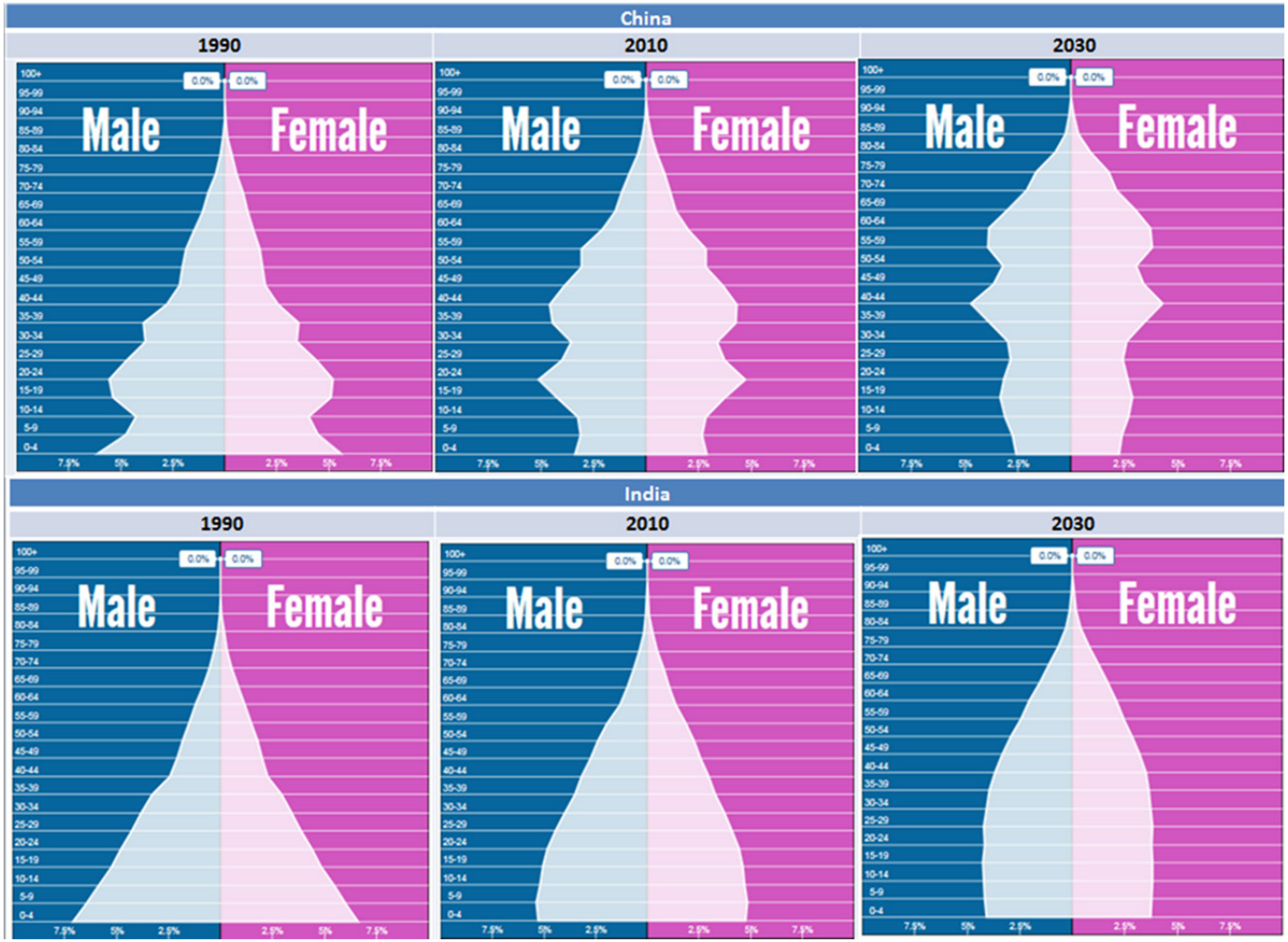
Source: Standard Chartered Bank, 2013

According to SCB, China experienced a higher and faster growth than India not only due to a higher contribution of physical capital to its growth but also because "*China has invested in education and eliminated illiteracy [entirely], whereas in India, the [literacy] rate is 75% for men and only 51% for women*" (2010:21). These levels are important as literacy allows the population to more quickly absorb and implement new technologies (SCB, 2010).

Further to this, as of 2012, China and India are the first and second most populated countries on the planet, with a respective population count of 1.39 and 1.25 billion (UN, 2012). According to Libicki, Shatz and Taylor (2011) China's population growth is expected to peak around 2025 and, by then, not only will India's population match the latter but it will also continue to grow well into the mid-century.

It is worth noting that, despite its numbers, China's population is ageing rapidly (SBC, 2010) and its ability to regenerate its population by 2030 has become severely hampered, unlike India, which has a healthier ageing rate (Figure 5).

Figure 5 - China and India's Population Age 1990 - 2030



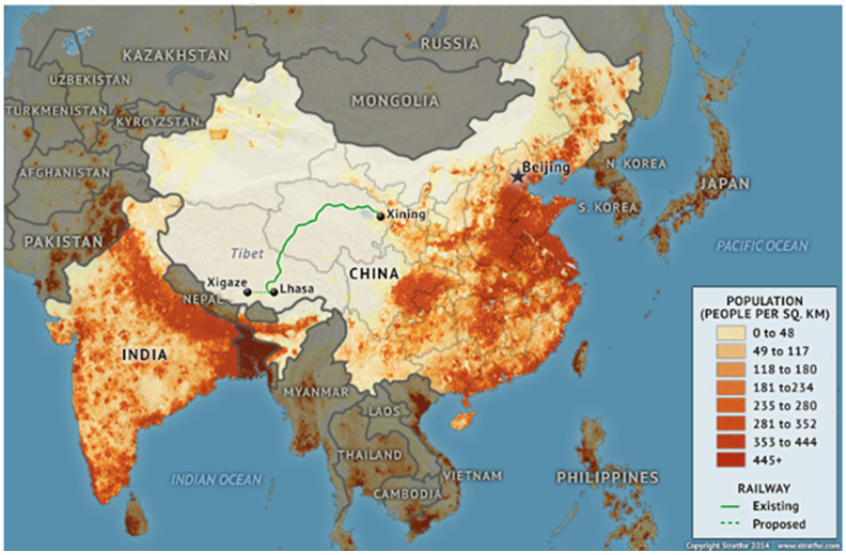
Source: populationpyramid.net, 2015

Libicki, Shatz and Taylor (2011) argue that, while lower birth rates do ultimately impact on a nation's ability to replenish its military personnel, richer economies can invest in specialised troops and advanced technology and weaponry. However, they also raise the argument that aging populations will often result in an increased cost for the state, through pensions and other services such as health care.

This suggests that while China will have the capability of acquiring and developing more advanced technology and weaponry by 2030, its shrinking labour market compounded with the growing demands of its ageing population may heavily impact its budgetary priorities. India, on the other hand, may well see an increase in its economy as companies begin to search for cheaper labour.

Where population density is concerned, due to its terrain and in-country migration to urban areas, over 50 per cent of the PRC's population resides to the east (CIA, 2014), either on or very close to its coast (Figure 6). That China's urban areas are so largely concentrated along its coast suggests a dependence on the access to the maritime domain. Unlike China, only 31 per cent of India's population resides in urban areas (CIA, 2014) and, despite showing a large concentration of population along its littoral, India also possesses a substantial amount of population density along its northern region (Figure 6).

Figure 6 - China and India's Population Density 2014



Source: Stratfor (2014)

Maritime Infrastructure and Naval Capacity

Turning our focus to the global maritime industry sector, according to UNCTAD, of the World's "*(…) top 35 ship-owning economies, 17 are in Asia*" (2013:42) in which China and India rank third and sixteenth respectively. The report further notes that, as of January 2013, China accounted for 11.8% of the total dead weight tonnage transported by sea, almost three times the percentage of United States (3.4%) and over ten times that of India (1.3%).

Where Naval capabilities are concerned, Table 2 below provides us with logistics for both the PLAN and IN, as of 2013.

Table 2 – Naval Logistics

Navy Logistics		**Country**		
		United States	**China**	**India**
Personnel[31]		326,800	235,000	58,350
Principal Surface Combatants	Aircraft carrier[32]	20	1	2
	Cruisers	22	0	0
	Destroyers	62	17	12
	Frigates	11	54	13
Submarines	Strategic	14	4	0
	Tactical	59	66	14
Amphibious[33]		343	458	98
Patrol & Coastal Combatants		55	223	96

Source: IISS, 2015

According to IISS (2015), the rate of real defence-spending increases in Asia has accelerated since 2010, rising by a total of 27.2%. The IISS also shows that in 2014, in terms of real defence spending:

> *Chinese defence-spending increases have outstripped those of other regional states in recent years. While China accounted for some 28% of the Asian total in 2010, by 2014 this had risen to around 38%. By contrast, Japan's share of regional outlays fell from*

[31] Includes Active and Conscripted Personnel
[32] Includes Helicopter carriers
[33] Excludes Helicopter Carriers

20.2% in 2010 to 13.9% in 2014, while that of India dropped from 15.4% to 13.1%. (IISS, 2015:210).

It further reports that over the years the PRC has poured large amounts of investment into Research and Development (R&D), and that, further to the commissioning of its first aircraft carrier in 2011, "*the PLAN is undertaking mass production of destroyers (…), frigates (…) and corvettes (…) to build a navy sufficient in numbers to patrol its near seas and project power into the Pacific and Indian oceans*" (2015:213).

On this note, O'Rourke (2013) explains that while the capabilities of the PLAN are still far lower when compared to those of the USN, the rate of its modernisation should make it a capable Anti-access / Area Denial (A2/AD) within the East and South China Seas by 2020.

Where India's naval modernisation is concerned, while its naval platforms have contracted logistically between 1991 and 2011, the IN has focused its modernisation on the quality of its vessels and increasing the number and quality of missile cells each carries (Hughes, 2014). However, the IISS (2014) reports that given that India is almost entirely dependent on foreign purchases for its defence purposes, the depreciation of its currency over the recent years has reduced its purchasing power and access to more advanced weaponry.

On this note, in a recent speech on the subject of Maritime Security, Admiral Arun Prakash (Retd.) criticised India's lack of development in the field of maritime infrastructure, arguing that:

It is a quirk of fate that India has become a significant military and economic entity, with great power aspirations, before it has become a significant industrial power or even a major trading nation. Thus India finds itself in an anomalous situation wherein it possesses nuclear weapons and boasts of the world's 5th or 6th largest armed forces, but it is forced to support their operational requirements

through massive imports. There is inadequate realization of two facts: one, that every piece of hardware that the Indian armed forces acquire from abroad places them at the mercy of the seller nation for the lifetime of the equipment; and two, that if our peacetime arsenals remain half-empty – whatever the reason – how will we ever fight a war? (2013:website).

Despite this, in 2013 India became one of the only six countries in the world "*(…) to design, build and operate a nuclear-powered ballistic-missile*" (IISS, 2014:213), and June of 2014 saw the commissioning of the IN's new aircraft carrier *INS Vikramaditya*, followed shortly thereafter by the commissioning of a guided-missile destroyer and four anti-submarine warfare frigates (IISS, 2015).

While the logistics of China and India's naval modernisation speak to their increasing Sea Power capabilities, which will contribute to identifying both nations' maritime geostrategies further ahead, based on which assets are employed by each nation, in order to ascertain a more accurate understanding of the underlying motivations and strategy, it is also important that the character of each nation's government be analysed.

Character of Government

According to Romana (2005), much – if not all – of China's economic success over the past three decades is due to the PRC's governmental structure under the one party rule. He explains that the China Communist Party's (CCP) uncontested and unquestioned rule allowed for economic reforms to be implemented gradually, smoothing out any edges along the way.

He further explains that since its inception, all key decisions pertaining to the governance of the PRC have been entirely monopolized by the CCP, whose main objective is to ensure its hold on power, pointing out that while the economy was opened to the outside world and some political liberties have been implemented, the Politburo Standing Committee (PSC) has never relinquished control of the state and that *"[o] núcleo de decisão*

estratégica formado pelo Comité Permanente do Politburo e pela Comissão Militar Central [CMC] constitui a base da estabilidade do Poder [34]" (Romana, 2005:35). On this note, the IISS describes the CMC as:

> *[T]he supreme military decision-making body in China, commanding the PLA and the paramilitary People's Armed Police (PAP) [and] also directly controls the Ministry of Defense, the military area commands and the navy, air force and 2nd Artillery HQ* (IISS, 2014:207).

On the subject of China's geostrategic options in the 21st Century, Xu (2006) argues that having almost entirely resolved its border disputes, China must now focus on the maritime frontier, as it is not only the source of much of the PRC's economic development but also of its current threats.

Considered as the "*(…) the most authoritative statements of how Beijing views its strategic context and the threats that inhabit its neighbourhood*" (Yoshihara & Holmes, 2010:22), the PRC's Defence White Paper (DWP) for 2013, focuses on the subject of its sovereignty and maritime interests, admonishes Japan's behaviour towards the disputed Diaoyu/Senkaku Islands and accuses the USA's rebalance to Asia of further destabilizing the region.

According to IISS (2015), evidence that the perception of such threats are taken seriously can be seen not only in the PLA's increasing investment and expenditure on its naval modernisation, particularly since the current President Xi Jinping assumed office in late 2012, but also in the PLAN's growing assertiveness in East and South China Seas. Finally, the PRC also sees its modernising Navy as a means of projecting influence and asserting its interests overseas, by patrolling SLOC against piracy, engaging in naval exercises and port calls to other nations (IISS, 2014; PRC-MOD, 2013; Till, 2012).

[34] Translation by author: "*[the] core of the strategic decision making formed by the Politburo Standing Committee and the Central Military Commission (CMC) constitutes the foundation of the stability of Power*".

Conversely, Bahl (2010) explains that India's experience with policy makers was much more volatile, given the numerous changes of government, compounded by a deeply rooted and sluggish overly-bureaucratic system, all largely to blame for its much slower economic rise.

On India's approach to National Security, Prakash suggests that, since its independence, most Indian statesmen have shied away "(…) *not just from outlining national aims and objectives but also, from providing guidance regarding strategic aims and end-states to the country's armed forces leadership*" (2011:14).

He further argues that the problems lie not in the lack of means or know-how, which he claims are abundant in the Indian private sector, but rather in the government's unwillingness to invest in this domain. In his view, poor management and lack of inter-agency cooperation and communication illustrate the Indian government's attitude towards maritime security and its role within it, claiming that: *"(…) generalist bureaucrats have been placed in positions which require specialist maritime knowledge and expertise [that] is never sought, from professional maritime organizations like the Coast Guard or the Navy (…)*" (2013: website).

However, according to the Ministry of Defence of the Government of India (MOD-GOI) "*(…) there is a growing acceptance of the fact that the maritime domain is the prime facilitator of [India's] development. More than 90% of our trade by volume and 77% by value are transported over the seas*" (2012:34). This is in line with its official maritime strategic doctrine, "Freedom to Use the Seas" (IHMDN, 2007) which states that "*[t]he primary task of the Indian Navy towards national security is, therefore, to provide insulation from external interference, so that the vital tasks of fostering economic growth and undertaking developmental activities can take place in a secure environment*" (IHMDN, 2007:10).

According to Japan's National Institute for Defense Studies (NIDS) since India moved away from its traditional policy of non-alignment, its policy choices have been geared towards creating a network of relations with major powers that might curb Beijing's attitudes towards Delhi (2013). China's growing presence and influence in the Indian Ocean

is seen as a matter of concern for the Indian government, leading it to not only strengthen and reaffirm its position in the IOR but also counter-balance by projecting the IN into the South China Sea (Scott, 2013).

Calculating Sea Power

Based on the data above, it will now be possible to resort to Sakhuja's equation for perceived Sea Power Potential. Furthermore, once a numerical notion is achieved for each country, this study will resort to the trends and contentions observed above in order to provide a more accurate understanding of China and India's sea power potential for 2030.

2.2 ASSESSING CHINA AND INDIA'S SEA POWER POTENTIAL

As observed in Part I, a nation's Sea Power is ultimately relative to that of the nation it is being compared to. Given that the United States is widely considered as the global leader in terms of Sea Power (Hughes, 2013; Till, 2012; Mohan, 2010), this study will resort to its EoS as the base values to which China and India's will be compared.

In order to simplify the process, the United States have been attributed with a Sea Power potential value of 100. In other words, where the United States is concerned:

$$\mathbf{SP = (G + E + M + T)\ (S + W) = 100}$$

It is important to note that the attributed value is for reference only, to facilitate the calculation of China and India's Sea Power potential. In other words, based on the formula, the sum of each group of variables amounts to 10:

$$\mathbf{SP = (G + E + M + T)\ (S + W) = (10)\ (10)}$$

Given this, each variable within the respective group must be attributed with a value that reflects this accordingly. However, given that the **S**trategic (maritime) culture and the **W**ill of a nation are intangible variables (Sakhuja, 2011), these will not be factored in during the calculations, and so each nation will be attributed 'full marks' for the sum of both. This choice is carried out to facilitate the calculation process and does not aim to suggest that these elements are to be discounted or disregarded, much to the contrary. Following the

calculation of each nation's potential, trends and contentions for each will be observed based on data previously analysed.

This means that the four variables to be quantified will be **G**eography, **E**conomic capacity and **M**ilitary and **T**echnological capabilities; in other words, where the United States' variables are concerned, based on the formula, each amounts to 2.5:

$$\mathbf{SP = (G + E + M + T)\ (S + W) = (2.5 + 2.5 + 2.5 + 2.5)\ (10) = 100}$$

Each variable in turn will represent a cluster of EoS that are quantifiable. For instance, **G**eography will be composed of Land Area (sq km), Area of EEZ (sq km) and Length of Coast (km). The remaining division of variables can be seen in Table 3 below.

Furthermore, as each variable represents a different cluster of EoS, the total value of each will have to be divided between the number of elements that comprise it. However, in order to take into account the subjective nature of these values, different 'weighting' will be applied to each EoS.

For instance, where Geography is concerned, it is this study's contention that land area doesn't bare as much weight as a nation's EEZ or the length of its coastline. Taking the cases of China and India into account, while China has almost three times India's landmass, a substantial amount of it is desert terrain and scarcely populated (CIA, 2014). As such, for the purposes of this calculation, the weight attributed to Land area will be equal to 0.5, while EEZ and Length of Coastline will each be attributed with 1.0.

The weighting attributed to the remaining variables can be seen below, in Table 3.

Table 3 – Caculation of Sea Power Potential

Nation	G = 2.5			E= 2.5			M = 2.5					T = 2.5	Total
	Land (sq km)[1]	EEZ (sq km)[1]	Coast (km)[1]	Number of Ships[2]	Dead-weight Tonnage (% of World Total)[2]	GDP ($ Tn.)[1]	Aircraft Carriers[3]	Strategic Submarines[3]	Tactical Submarines[3]	Naval Aircraft[3]	Naval Personnel (Total)[3]	Defence Expenditure ($ Bn.)[3]	
United States (Total)	9,826,675	11,351,000	12,048	1,927	3.420	17.42	20	14	59	1,150	326,800	528.00	
United States (Attributed Weight)	**0.50**	**1.00**	**1.00**	**0.25**	**0.25**	**2.00**	**0.80**	**0.75**	**0.25**	**0.50**	**0.20**	**2.50**	**10.00**
China (Total)	9,596,960	877,019[4]	14,500	5,405	11.938	10.38	1	4	66	332	235,000	129.42	
China (Relative Ratio to US)	**0.49**	**0.08**	**1.20**	**0.70**	**0.87**	**1.19**	**0.04**	**0.21**	**0.28**	**0.14**	**0.14**	**0.61**	**5.97**
India Total	2,973,193	2,305,143	7,000	753	1.292	2.05	2	1	14	47	58,350	45.20	
India (Relative Ratio to US)	**0.15**	**0.20**	**0.58**	**0.10**	**0.09**	**0.24**	**0.08**	**0.05**	**0.06**	**0.02**	**0.04**	**0.21**	**1.83**

Note:

(1) Values acquired from CIA (2014);
(2) Values acquired from UNCTAD (2014);
(3) Values acquired from IISS (2014c) and IISS (2014d)
(4) Does not take into account disputed areas claimed by China (CIA, 2014)

China and India's Sea Power Potential

Further to the findings above, it is clear that China and India have a wide discrepancy where their respective Sea Power Potential is concerned. Compared to that of the United States, China holds nearly two thirds of the US's potential, whereas India barely has a fifth.

While this does provide an idea of who between China and India, in absolute terms, holds the strongest Sea Power capabilities, as observed earlier, some contentions have to be taken into account based on the data analysed beforehand.

Where Geography is concerned, though China's coastline far exceeds that of India, its EEZ is significantly smaller. Moreover, the table does not take into account the issue of location; while China's access to the open oceans is constrained, India enjoys wide access and holds islands strategically located close to the Strait of Malacca, arguably the most important strait for China's maritime trade (O'Rourke, 2013; Rocha, 2013). Furthermore, the table does not account for India's projected rise to the world's third largest economy by 2030, an increase which in turn will allow it to invest on advanced weaponry (Prakash, 2010). However, as China's economic power is projected to become almost equal to that of the United States by 2020, compounded with its growing indigenous technological capabilities, China too will enjoy access to more advanced weaponry (O'Rourke, 2014).

Nevertheless, despite the investment both nations are placing in their indigenous technological capabilities, it is unlikely that either will be able to come close to the United States' capabilities by 2030 (IISS, 2015). On that note, as India's relationship with the United States grows stronger, it will potentially have access to the more advanced American platforms.

Focusing on China, despite the United States' overwhelming Sea Power capabilities, where its naval elements are concerned, such as aircraft carriers and strategic submarines, the numbers shown on the table account for the entire USN fleet, which is scattered across the globe (IISS, 2015). As the PLAN possesses no forward bases of operation (IISS, 2015), as of yet, its entire fleet is spread out throughout its coast, and is increasingly more capable of taking on the USN in its own waters (Hughes, 2014b; O'Rourke, 2013).The same holds true

for the IN in the IOR, however as its cooperation with the USN grows stronger, it seems unlikely that these two forces will be at odds with one another.

In sum, while China and India grow increasingly capable of holding the strategic superiority in their respective neighbourhoods, where power projection is concerned, as both nations invest on more advanced A2/AD platforms and technological capabilities (IISS, 2015; Hughes, 2013), it is unlikely that either will be able to hold the strategic advantage in the other's respective neighbourhood (Scott, 2013).

Nevertheless, the ability to counter the global leading sea power is not indicative of the will to do so, much less of the certainty that the stability of International Maritime Security can be impacted by 2030. In order to determine whether such is possible, this study will have to take this into account in conjunction with China and India's current Maritime Geostrategies.

2.3 CHINA AND INDIA'S MARITIME GEOSTRATEGY

As pointed out in Part I, a nation's maritime geostrategy consists in the strategic convergence of its resources, towards the maritime domain and/or locations at sea considered vital to its interests, under a particular geopolitical context, in the form of power projection expressed through its Sea Power capabilities.

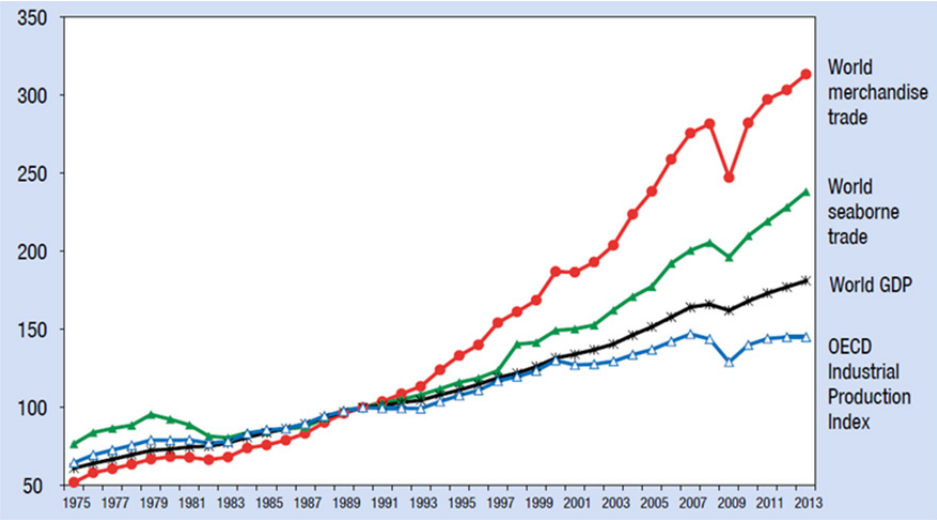
As such, in order to accurately portray China and India's Maritime Geostrategies, it is necessary that their vital interests, obtainable primarily by sea, be identified along with the resources employed to secure these.

2.3.1 Maritime Trade and Energy Dependence

According to Pandya et al, the 21st century has experienced the strongest rise in the history of shipping, during which maritime container trade between Asia and Europe grew annually by 20% until 2007. They further confirm the earlier observation that "*ninety percent of world trade measured by weight and volume (and 80% as measured by value) is carried in seaborne commerce*" (2011:13).

According to the United Nations Conference on Trade and Development (UNCTAD) (2013), following the 2008 global financial crisis, despite a slow recovery, seaborne trade has continued to increase at a steady annual rate (Figure 7).

Figure 7 – World Merchandise and Seaborne Trade (1975-2013)

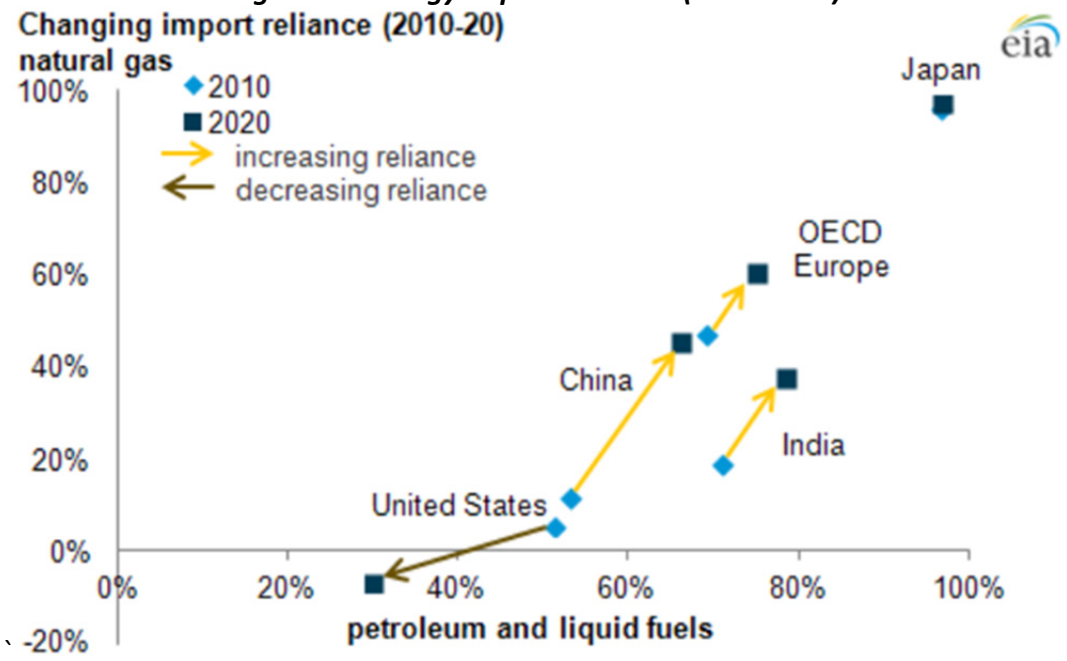


Source: UNCTAD, 2013

Furthermore, "*[i]n 2013, [about 63% of] total world petroleum and other liquids production (…) travelled via seaborne trade*" (EIA, 2014e:website). Interestingly, while demand for crude oil declined globally in 2012, "*import volumes increased by 7.4 per cent in China and over 4.0 per cent in India*" (UNCTAD, 2013:16). Moreover, China and India currently stand as the second and fourth largest global consumers of oil products, as an energy source, respectively (Enerdata, 2014; EIA, 2014d).

Erickson & Collins (2012) explain that by 2009 half of China's crude oil was imported, 80 percent of which was seaborne. Furthermore, according to the EIA (2014b), close to half of India's domestic oil production is offshore based and virtually all oil and gas imports are from countries with which India shares no borders and, thus, were most likely met by sea.

Figure 8 – Energy Import Reliance (2010-2020)



Source: EIA.gov (2014d)

Further to this, the EIA predicts that "*China will experience the largest absolute growth in liquid fuels consumption, growing by about 46% by 2020 [with] India [likely] to have the fastest growth rate in liquid fuels consumption from 2010 to 2020 (3.0% per year)*" (EIA, 2014d:website). The EIA (2014b) also expects that China and India's energy consumption will come to represent half of the global energy demand up to 2040.

As such, it is safe to establish that imported energy resources will increasingly constitute a vital strategic interest to both China and India. Moreover, the fact that such resources are finite is a good indication that both nations will need to take stronger action in obtaining reliable and continuous sources of energy, having to compete with each other in order to do so (EIA, 2011). While it has been made clear that the maritime domain will play a vital role in that endeavour, in order to accurately outline each nation's maritime geostrategy, it is also important to focus on which geographic locations have most focus regarding the core interests in question.

2.3.2 Energy Imports and Maritime Security

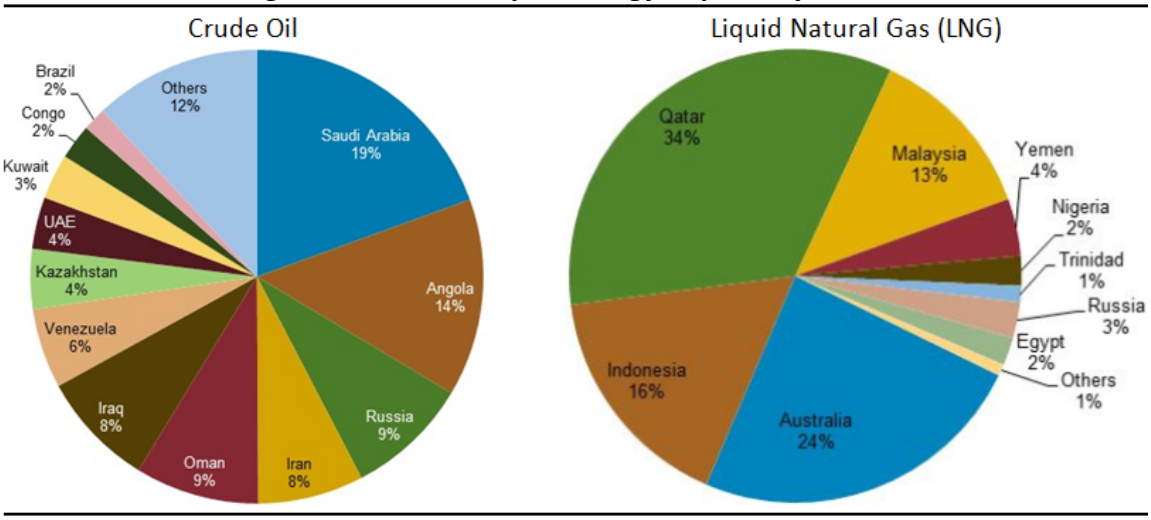
It is thus unsurprising that China and India's escalating economic growth and industrial modernisation is believed to be observable, not only in their growing regional and global political influence but also in their pursuit of energy security (Weimar, 2013; Till, 2012; Mohan, 2010, et al.). According to Weimar:

> *[S]ustainable access to domestically scarce energy resources, in particular oil and natural gas to fuel the growing transport and industrial sectors, has become a paramount security factor for both Beijing and New Delhi. In order to maintain resource supply security and decrease dependency on volatile suppliers, there is a pressing need for China and India to acquire and protect energy assets overseas, gradually shaping their foreign energy policies* (2013:5).

The African continent is an example of this, where China and India currently compete to secure large construction and telecommunications projects, which facilitate their access to much needed resources (Cheru & Obi, 2010).

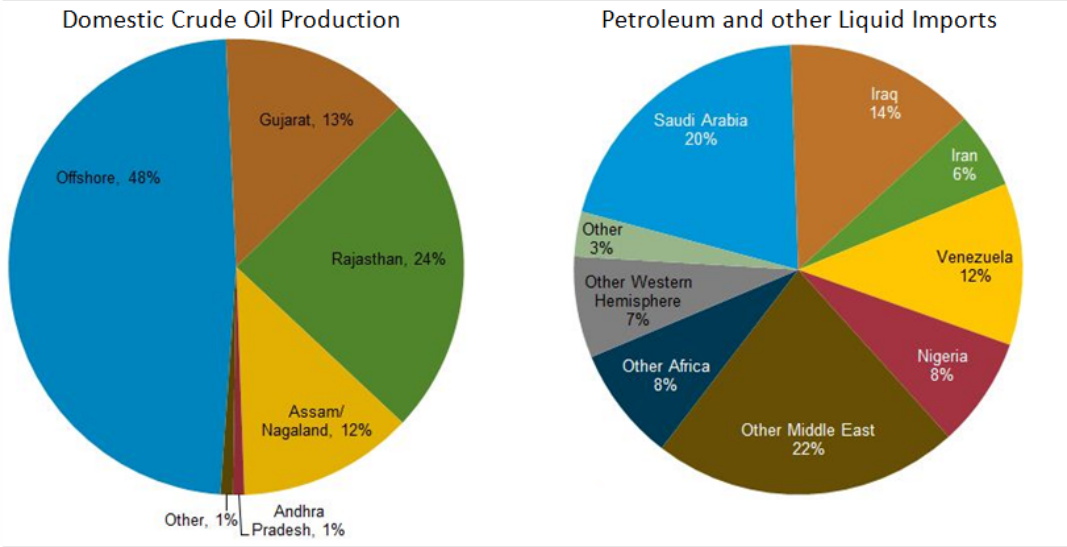
In fact, as of 2014, at least two thirds of China's crude oil imports and over a third of its Liquid Natural Gas imports, came from Middle Eastern or African countries (EIA, 2014a), most of which were most likely transported by sea, as shown in Figure 9. Moreover, Chakraborty's argument that "*India's economic resurgence is directly linked to her overseas trade and energy needs, most of which is met by offshore oil production*" (2010:155) is made particularly relevant in Figure 10.

Figure 9 – China's Liquid Energy Imports by Source



Source: EIA, 2014a

Figure 10 – India's Domestic and Imported Crude Oil



Source: EIA, 2014b

Lee argues that given the exponential growth of its energy needs China conducts:

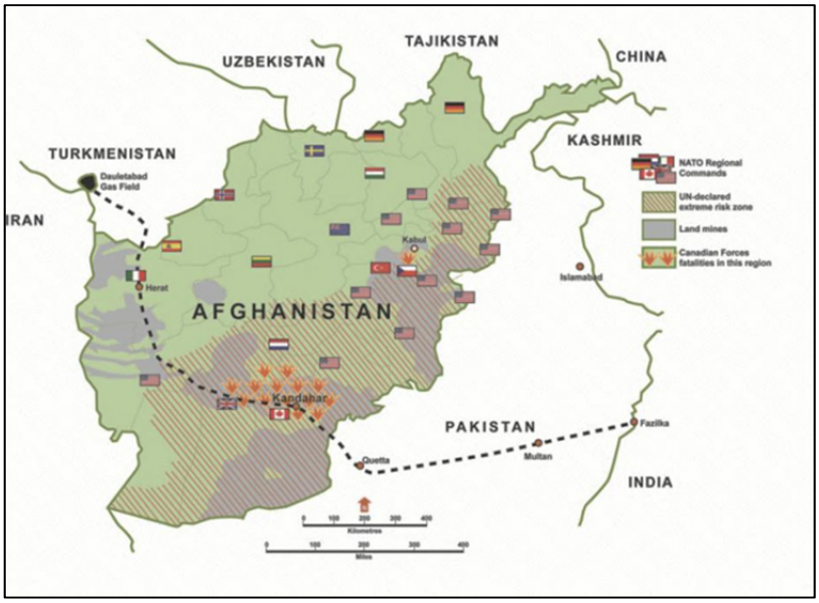
> *[A]n economic nationalist, or "China-first", agenda in many parts of the world [by] offering extensive political and economic assistance to its [State Owned Enterprises (SOEs)] in the search to own offshore oil assets in many side-lined or pariah states, or else conclude deals to lock up guaranteed supplies from offshore oil fields* (2012:75).

Such deals are not exclusively reserved to energy resources, however the latter figure prominently in Beijing's foreign policy and bilateral accords (Cheru & Obi, 2010; Romana, 2005).

Conversely, Indian investment comes largely from "*private sector operators [who] are struggling to catch up with China but lack the financial and political backing from the state that Chinese [SOEs] enjoy*" (Chery & Obi, 2010:3). In addition, Khurana (2007) argues that, due to hostile relations with Pakistan and Bangladesh, New Delhi has encountered vast difficulties and obstacles in securing overland gas pipelines with Central Asian countries and Myanmar – all rich providers of natural gas.

On this note, despite promising advancements in 2012 for the Trans-Afghanistan (TAPI) pipeline, which is meant to transport natural gas from Turkmenistan to India (Petersen, 2012), Snow (2014) argues that the project is still in its early stages of development and, given that the pipeline needs to traverse through Afghanistan (Figure 11), a war torn country where security is far from guaranteed, and Pakistan, with whom India holds fragile relations, makes the project an unsecure source of energy.

Figure 11 – Proposed Turkmenistan, Afghanistan, Pakistan and India (TAPI) Pipeline route



Source: Foster, 2014

This suggests that offshore and overseas energy sources will continue to factor highly in India's national interests, regardless of its ability to compete with China.

Knowing the source of China and India's seaborne energy imports is useful, as it not only provides an idea of the geographic focus of their foreign policy, where energy security is concerned, but also of the most likely routes these imports will be transported through. Further to the data analysed above, it is clear that both nations' energy security concerns lie at the heart of their maritime geostrategies, based on the concept established earlier. According to Pandya et al:

> *[T]rade routes are determined in large part by the locations of the points of trade, but they in turn are facilitated, threatened or simply constrained by the nature of the coasts, channels or waters they must traverse — peopled, exploited, policed, patrolled, or otherwise used by nations and groups with varying interests* (2011:5-6).

That these routes are vulnerable to risks and/or threats, whether human or not, is of concern to most nations which, in turn, employ mitigating measures as they see fit (Hiranandani, 2009), with China and India being no exception. The need to secure national interests, as observed above, is inherent to a nation's geostrategy; however each risk and/or threat begets a particular level and means of securitisation and, as such, it is necessary to understand which threats China and India factor most highly in their maritime geostrategies.

2.3.3 State and non-State Threats to Maritime Security

Potential threats originating from State actors

Comparing the current naval arms race in South and Southeast Asia to that of pre-WWII Europe, Yoshihara & Holmes argue that while "*[t]here is little reason to believe a similar great-power cataclysm is imminent today (…) the material ingredients for competition and rivalry are certainly present in the tight confines of the East Asian littoral*" (2010:3).

This is a view shared by others (Till, 2012; Sakhuja, 2011), and a practice that extends from the Western Pacific to the Indian Ocean (IISS, 2014). Another view that is equally shared is the idea that, as their Sea Power capabilities develop, China and India will become increasingly assertive and less reluctant to act where maritime matters are concerned – either in the interests of the wider international community or their own (Hughes, 2014; Mohan, 2010).

Further to Corbett's writings analysed earlier, the strongest threat that any nation stands from another's navy is to have its access to SLOC denied, particularly if said nation's economy is intrinsically dependent on them.

Recognizing the vulnerability of the PRC's dependence on seaborne energy resources, many Chinese analysts and officials believe that by building "*[pipelines] from neighbouring oil producers [and] additional lines to 'bypass' the Strait of Malacca, China can protect [its] oil imports from possible interdiction during a conflict*" (Erickson & Collins, 2010:90).

This concern is understandable, particularly given that, as of 2012, over 80 percent of China's sea based imports of crude oil transit through the Strait of Malacca (Figure 12), which according to the EIA:

> *[I]s the key chokepoint in Asia, with an estimated 15.2 million bbl/d flow in 2013 [of] crude oil (...). [A] natural bottleneck, [vulnerable to] piracy, including attempted theft and hijackings, (…) if [it] were blocked, nearly half of the world's fleet would be required to reroute around the Indonesian archipelago [tying] up global shipping capacity, adding to shipping costs and potentially having a significant impact on energy prices* (2014e: website).

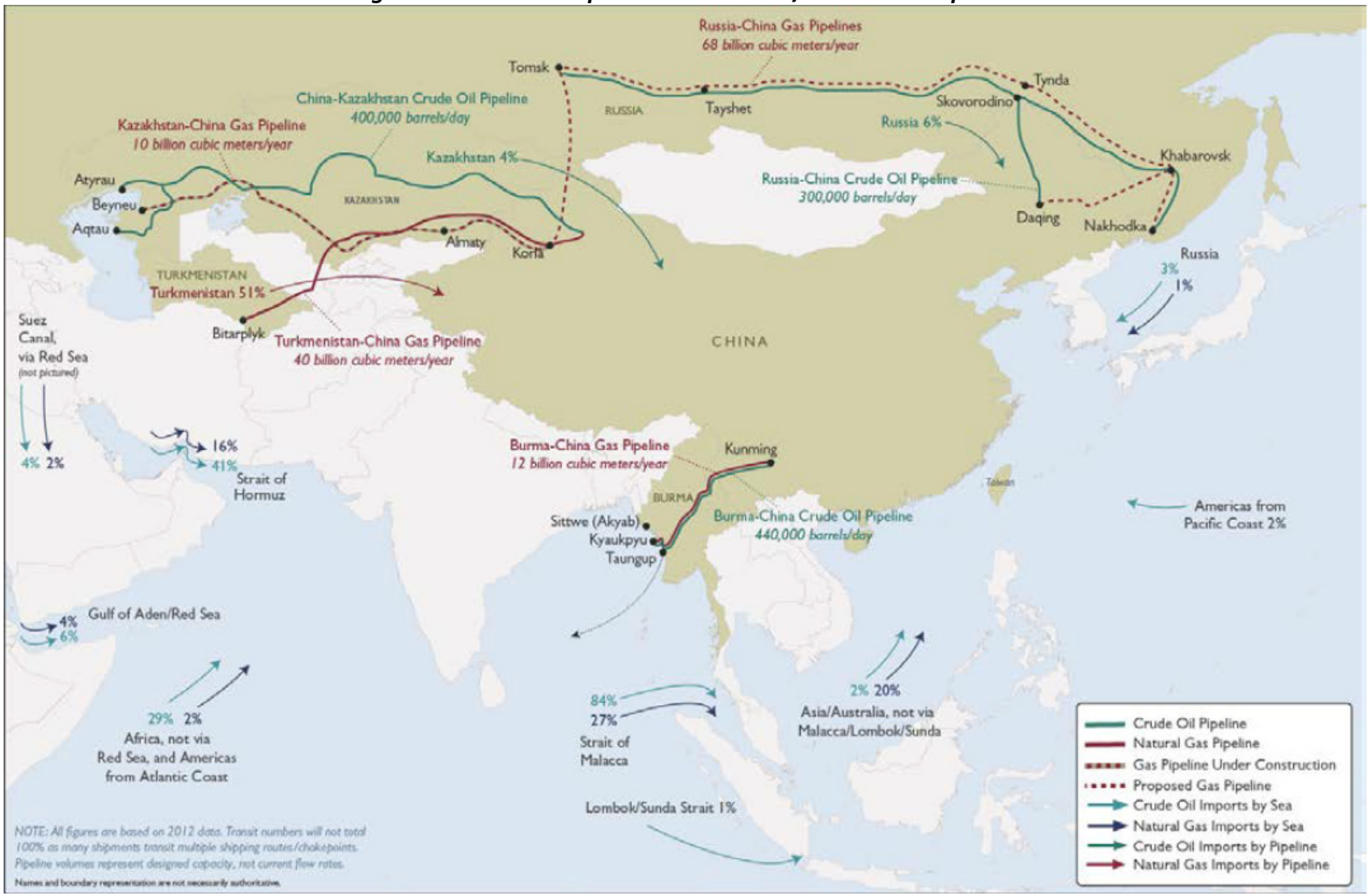
While the probability of the Strait of Malacca becoming blocked from a piracy or maritime terrorist attack, as described above, is extremely low, the potential for selected

ships (for instance, vessels on route to China) being denied passage by an antagonistic navy[35] is a different matter entirely (Bateman, 2010).

Given China's dependence on this straight for its energy security, any attempt to block it would very likely be met with force from the PLAN – a course of action that would potentially carry the same consequences described above. As such, this study will contend that any conflict in the immediate region of the Strait of Malacca has the potential of impacting International Maritime Security, given that the consequences affect not only the actors in the region but also the stability of the SLOC that traverse it and on which global trade is dependent.

[35] As, for instance, the American blockade of Soviet ships bound for Cuba during the 1962 Missile Crisis.

Figure 12 – China's Import Transit Routes/Critical Chokepoints



Source: USDOD, 2014

Regarding potential conflicts in the region, it is widely suggested (Hughes, 2014; O'Rourke, 2012) that the predicted exponential growth of China's energy needs over the upcoming decade is directly linked to its growing assertiveness towards the disputes in the East and South China Seas. According to the EIA (2013b) the latter is believed to hold, in proved or probable reserves, about 11 billion barrels of oil and 190 trillion cubic feet of natural gas and, potentially, an additional 12 billion barrels of oil and 160 trillion cubic feet of natural gas of yet undiscovered resources.

China's claims over the South China Sea (Figure 13), often referred to as the 'nine-dash-line', "*far exceeds what is claimable as territorial waters under customary international law of the sea as reflected in UNCLOS, [including] waters that are within the claimable EEZs (and in some places are quite near the coasts) of the Philippines, Malaysia, Brunei, and Vietnam*[36]*"* (O'Rourke, 2012:11). The resulting disputes over these waters are at the core of various tensions and small scale conflicts that have re-escalated frequently in the past decade (Hughes, 2014).

[36] Given that the PRC does not recognize Taiwan as an independent state, but rather a rogue province, it also lays claim to its territorial and contiguous waters and EEZ.

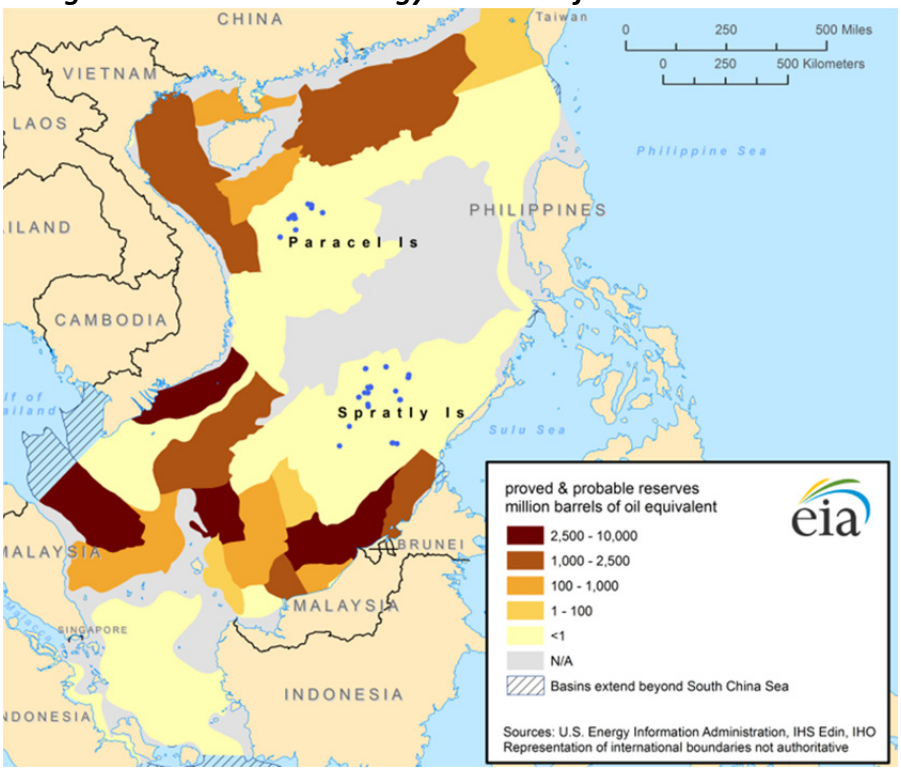
Figure 13 – Southeast Asia EEZs

Source: The Heritage Foundation, 2014[37]

However, according to the EIA (2013b), only about one fifth of the SCS's energy resources may be found in contested areas (Figure 14), not to mention technological challenges plus huge costs and political risks also place serious limits on deep-water drilling extracting them may not be economically feasible.

[37] Details of the original version of this map have been removed. The unaltered version can be accessed at: http://www.heritage.org/multimedia/infographic/2014/04/china-actual-eez-vs-nine-dash-line

Figure 14 – Estimated Energy Reserves of the South China Sea



Source: EIA, 2013b

This lends credence to Pitlo's argument that a conflict in the South China Sea is more likely to take place over the region's fisheries, which currently account "*for one-tenth of the world's global fisheries catch, and plays host to a multi-billion dollar fishing industry*" (2013:website). He further argues that fish protein accounts for over 22% of the average Asian diet which, with growing incomes across the region, is likely to increase, leading to possible overexploitation of the fisheries (Associated Press, 2012).

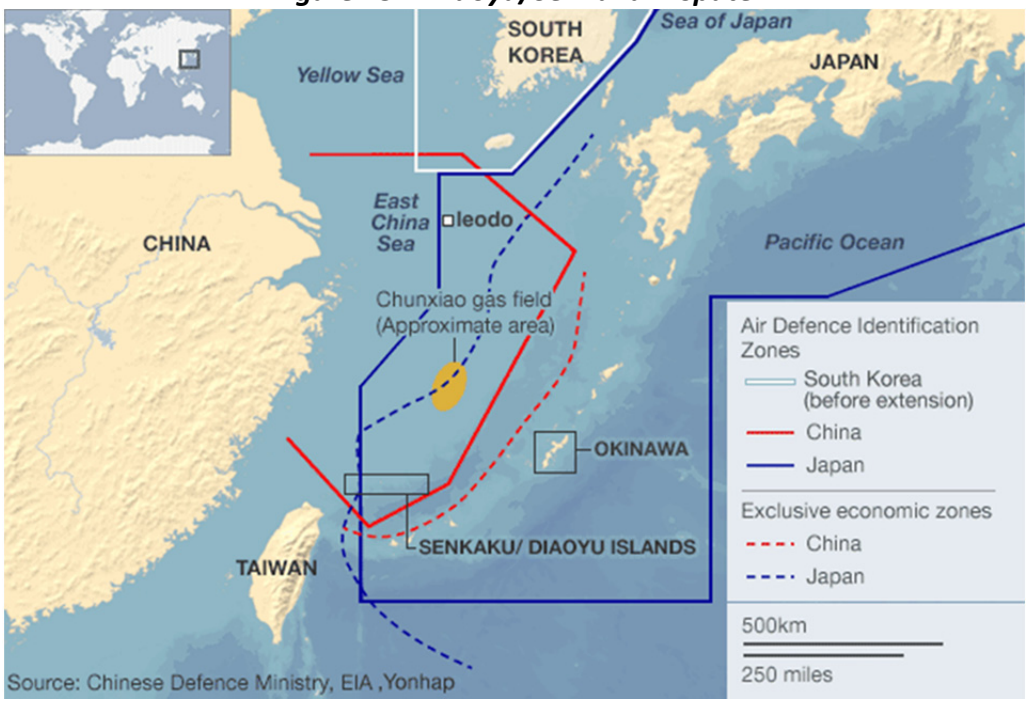
While arguing that a conflict between China and any of the Southeast Asian states, would be highly unlikely, Bateman argues that "(…) *a possible trigger for such a threat exists in the South China Sea with the unresolved sovereignty disputes [and] would be catastrophic for [all[] parties"* (2010:108)

It should be emphasized that Bateman's assessment dates to 2010. More recent behaviours in Southeast Asia, between China and other states involved in the disputes shows a much more volatile environment. As Leaf (2014) reports, in early May 2014 China placed an oil-drilling rig well within Vietnam's 200-mile EEZ set by the UNCLOS. Furthermore,

"*approximately thirty Vietnamese vessels tried to intervene, but were repelled by the eighty plus Chinese ships protecting the rig*" (2014: website). Shortly thereafter, Chinese naval vessels also rammed and sunk a Vietnamese fishing vessel in the area, which the former accused of engaging in harassing manoeuvres prior to the incident (BBC, 2014a).

Another dispute, which has recently escalated, is that of the Senkaku/Diaoyu Islands in the East China Sea (Figure 15), currently under the authority of Japan. These islands are important to both parties due to their proximity "*(…) to important shipping lanes, (…) rich fishing grounds and (…) potential oil and gas reserves. They are also in a strategically significant position, amid rising competition between the US and China for military primacy in the Asia-Pacific region*" (BBC, 2014b: website).

Figure 15 – Diaoyu/Senkaku Dispute

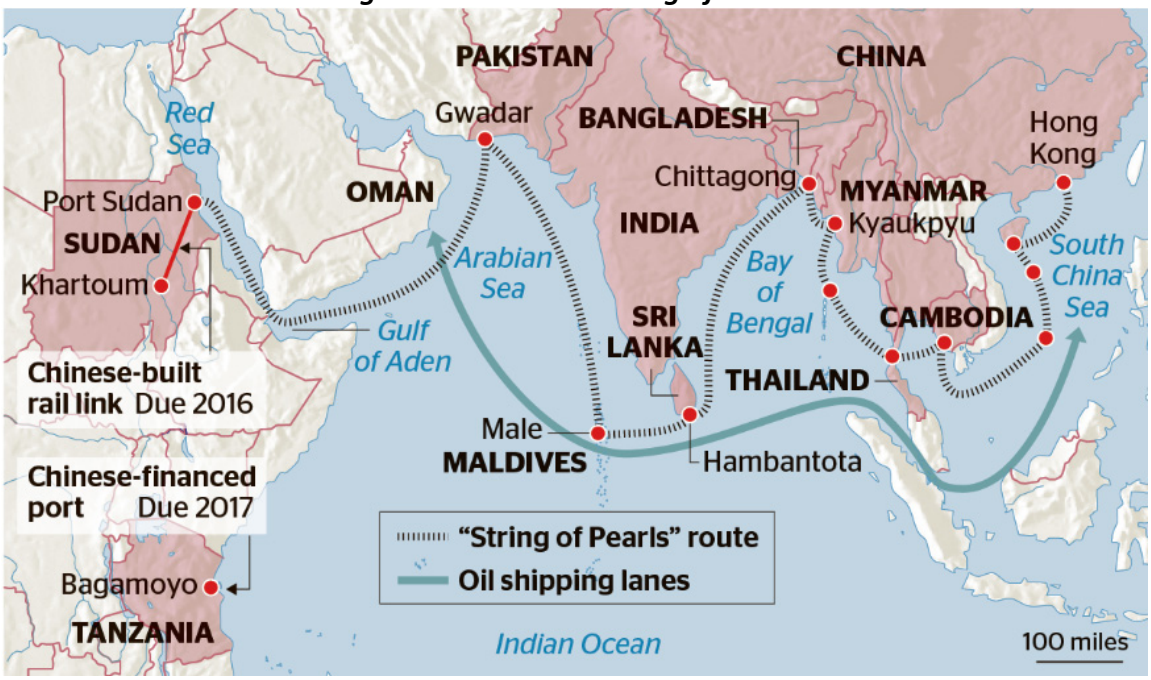


Source: BBC News, 2014

Despite the increased attention and resources that it has recently devoted to the disputes over these islands and the above mentioned passages, the PRC has also shifted its maritime focus westward, towards the Indian Ocean, a matter that has not gone unnoticed by India who, as some argue, is the strongest actor of the region (Sakhuja, 2011; Khurana, 2007).

India has grown increasingly concerned over the Chinese activity in building port infrastructure in and around South Asia, including Gwadar (Pakistan), Chittagong (Bangladesh), Sittwe (Myanmar) and Hambantota (Sri Lanka), under the so-called "String of Pearls" strategy, as it is commonly referred to (Hughes, 2014c; Till, 2012). From a strategic point of view this 'string of pearls', surrounds the Indian subcontinent and could potentially allow for the dispersal of naval forces in such a way as to block India's access to the Indian Ocean (Figure 16).

Figure 16 – China's 'String of Pearls'



Source: (Korybko, 2015)

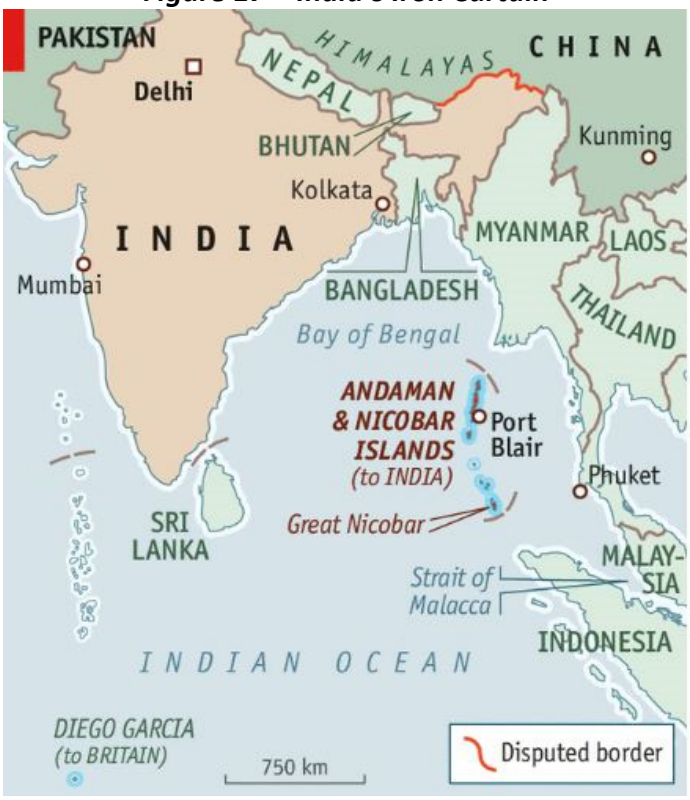
Much like China, the potential blockade of its access to the SLOC is a major concern for India, particularly given that:

> *[Almost] 97 percent of its trade (by volume) is seaborne, which is comparable to that of an island state. This adversity also bears on India's imports of oil and gas, all of which are presently transported via maritime routes* (Khurana, 2007:585).

However, unlike the Strait of Malacca, the vastness of the area surrounding the Indian subcontinent makes it highly unlikely that a maritime blockade could be successfully carried

out. Furthermore, it is important to note that the IN holds another geographic advantage over the PLAN, in terms of accessibility to the IOR, namely its Andaman and Nicobar Island chains, which are strategically located near the entrance to the Strait of Malacca (Figure 17). According to The Economist (2014), "*Chinese naval strategists warn of Indian designs to drop an 'iron curtain' there*" (2014: website), an effective choking strategy for the strait through which China is most dependent.

Figure 17 – India's Iron Curtain



Source: The Economist, 2014

In essence, as China continues to develop potential naval facilities in the IOR, and India's strengthens its relations with the United States and increases its presence in the South China Sea, both nations will continue to grow suspicious of one another (Mohan, 2009).

As mentioned above, SLOC are equally at risk of non-state threats. As such, it is important that these be taken into account when outlining China and India's maritime geostrategies.

Existing and Potential non-State threats to Maritime Security

While also listing maritime conflicts among nations, and possible climatic/environmental occurrences, as sources of disruptions, Cai emphasizes that:

> *[S]ince the middle of the 1990s, almost all those who watch the Indo-Pacific region have obviously connected maritime security with the energy-related SLOC, and one of the conclusions flowing from this is that the maritime stability is fragile because of increasing piracy and other illegal incidents* (2010:74).

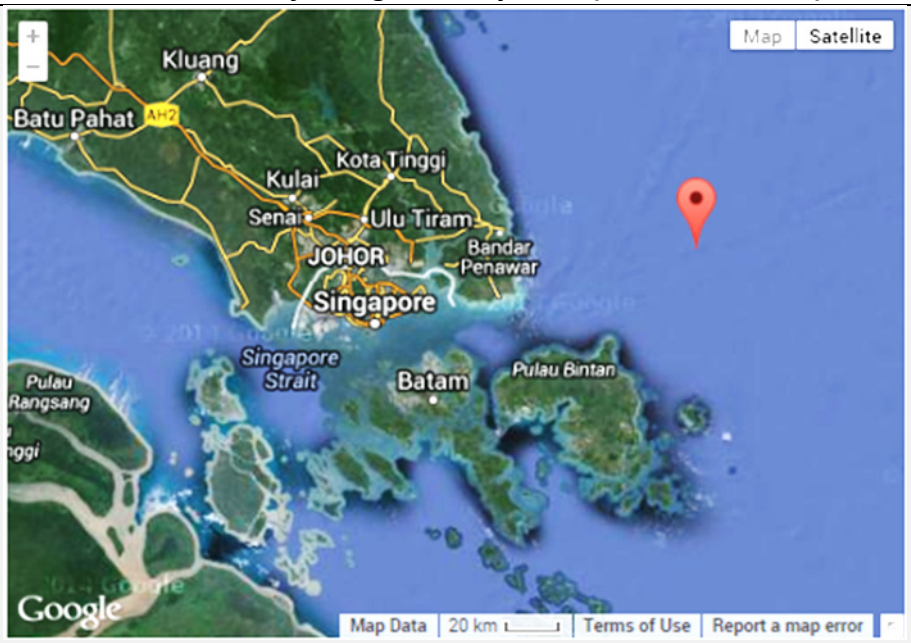
Pandya et al. (2011) seem to agree, and explain that the sharp rise in piracy levels witnessed at the end of the 2000's, in the Gulf of Aden, was directly linked to both the rise in maritime commerce in the region and its geographic layout. Further to this, although official numbers show that registered piracy attacks have decreased significantly worldwide[38] (Rigby, 2013), many attacks still occur.

More disturbingly, perhaps, are the number of attacks carried out within the region of Southeast Asia, particularly along the Malacca and Sunda straits. According to the International Chamber of Commerce's International Maritime Bureau's (ICC-IMB) (2014), of the 148 worldwide registered piracy attacks, between January and August 2014, roughly 23 and 60 percent occurred within the IOR and Southeast Asia respectively, despite concerted efforts from local, regional and international authorities to prevent such attacks.

A detailed example of a successful piracy attack in the South China Sea can be seen in Box 1 below.

[38] The IMB Piracy Report, published in October 2013, shows 188 piracy incidents in the first nine months of 2013, down from 233 for the same period last year.

Box 1 – Tanker Hijacking - 28 May 2014 (South China Sea)[39]



- **Location:**
  Around 23nm NE of Pulau Bintan
- **Type of Attack:**
  Hijack
- **Summary:**
  "*A product tanker laden with fuel oil cargo departed Singapore on the 27.05.2014 with ETA discharge port, Pontianak [Indonesia] 29.05.2014. The owners lost contact with the vessel [on 28.05.2014] and (...) on 01.06.2014 the vessel safely arrived at Sriracha port in Thailand. Information from the crew indicate that the tanker was hijacked by pirates who damaged the communication equipment on board the tanker and stole its oil cargo and transferred to a large barge. The crew and tanker are safe*".

Source: ICC-IMB, 2014

According to Bateman's Maritime Security Risk Assessment for Southeast Asia (2010), maritime piracy figures as a frequent crime with low level impact in terms of immediate consequences; however, it does raise serious concerns over the issue of maritime terrorism. As Ho points out, "*[m]aritime terrorists could hijack carriers of liquefied petroleum gas (LPG) and turn them into floating bombs to disable ports*" (2009:165). While Bateman (2010) argues that such attacks are unlikely to be carried out successfully, the example above suggests that such an attack could potentially be carried out.

While no such attack has yet been carried out, the 2008 Mumbai terrorist attacks can be labelled as an attack of Maritime Terrorism[40]. On November 26, 2008, ten members of

[39] This Box was put together by the author for the purposes of this dissertation.

the terrorist organisation known as Lashkar-e-Taiba (LeT) travelling from the sea on inflatable speed boats, disembarked on a beach Mumbai and proceeded to carry out one of the deadliest terrorist attacks in India's history (Moreau, 2008). One of the attackers, who was later captured, implicated the Pakistani Inter-Services Intelligence (ISI) agency in the planning of the attack, an allegation that albeit denied by the Republic of Pakistan served to further stress the relations between both countries (Shashikumar, 2009).

As an organisation that resorts to maritime terrorism, the LeT is of particular concern to India, as it could potentially:

> *(…) use the sea-route to infiltrate and attack India's oil assets in Bombay High, sabotage ports and target high value assets such as the atomic power plants located on the coast or attack INS Vikrant, India's (…) aircraft carrier while it is ensconced in dry dock facilities at the Cochin Naval Base*" (Shashikumar, 2009:website)

As governments become more efficient in tackling transnational threats such as organized maritime piracy or terrorist organizations (Bateman, 2010), it does not require a great deal of imagination to envision such organizations combining forces to meet their agendas. In fact, according to the International Institute for Security Studies' (IISS) such degrees of cooperation already take place in the IOR (2014) and, as the report above indicates, hijacked vessels can go for days without being located. Given this, the potential of a hijacked vessel being used for maritime terrorist purposes needs to be considered..

In sum, given China and India's dependence on sea based imported energy resources and the vulnerability of the SLOC on which they are transported, it is unsurprising that both nations have committed their navies to not only patrolling these but also invested in the modernisation of their naval units (Till, 2012; Yoshihara & Holmes, 2010).

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[40] See Annex A

However, some argue that the focus of their expenditure (submarines, aircraft carriers, etc.), suggests a more offensive rather than defensive agenda (Hughes, 2014; IISS, 2014). This raises a number of questions, such as what impact can China and India's accelerated military expenditure have on their respective capabilities? Or, how will their neighbours expenditure, also rapidly increasing, influence their perceptions and behaviours? As seen earlier, such a dynamic is conducive towards a maritime security dilemma.

Yoshihara & Holmes argue that when studying a nation's particular naval modernisation equal focus must be placed on both its logistics and its underlining strategy, raising the point that "*[i]f a navy's political masters and commanders incline towards offensively minded strategy, it will employ the assets at its disposal far differently from a navy predisposed to defense*" (2010:3). As such, a careful look at China and India's Naval Modernisation, and particularly the strategic drivers behind it, will be a necessary next step.

2.3.4 Naval modernization: Drivers and Maritime Strategy

Drivers of Naval Modernisation and Maritime Strategy

That both China and India have chosen to invest in vessels used primarily for power projection purposes, such as Aircraft Carriers and ballistic-missile submarines, highlights their desire to increase their Sea Power and the means of ensuring the defence/implementation of their interests from far beyond their shores (Hughes, 2014; Till, 2012; Yoshihara & Holmes, 2010).

While almost nothing is known of China's maritime strategic doctrine (Till, 2012) a notion of where it stands on the matter can be ascertained from official statements and policy documents, such as its DWPs. In its DWP of 2013, the PRC emphasizes the need for blue-water capabilities and advancements in information technology to safeguard its maritime interests, describing its navy as "*China's mainstay for operations at sea, (…) responsible for safeguarding its maritime security and maintaining its sovereignty over its territorial seas along with its maritime rights and interests*" (2013:5) (PRC-MOD, 2013).

It is important to note that, according Yoshihara & Holmes (2010) the strategic language used in the DWP is ambivalent, which potentially allows for (future) open interpretation adaptable to China's naval capabilities.

According to Hughes (2014b) China's recent behaviour in the East and South China seas is the escalation of a strategy that aims to achieve the independent securitisation of SLOC close to its coast. In other words, so long as China is unable to guarantee the safe passage of all vessels bound to and from its coast, whatever the situation, it feels vulnerable and threatened.

Some contend that it is for this reason that the reunification of Taiwan remains such a high priority for Beijing (Goodwin & Miller, 2013; Kaplan, 2009). As it lies at the centre of an island chain that stretches from Japan to the Philippines, creating an arch that encompasses the Chinese coast, Taiwan serves as an optimal point to block all outgoing ships, from either the southern or northern coast of China (Sakhuja, 2011).

On this note and raising the subject of the underlining strategy for the PLAN's modernisation, Yoshihara & Holmes (2010) argue that while there is a strong contention among many naval academics and Sea Power theorists that the return of Taiwan to mainland rule is the main driver behind Beijing's accrual of access-denial capabilities, to limit its ambitions to this would be a fallacy, as it suggests that once this objective is achieved, the PLAN will either pull back or, at the very least, simply seek to maintain a new status quo.

Huang's lends credence to this argument, as he explains that since the 1990's the PLAN has developed at an unprecedented and impressive pace, "*from a virtually inshore navy into a formidable, modern navy with blue-water capability [able] to 'break the first-island chain in a hostile environment' and to engage an adversary naval force beyond the range of land-based air and missile protections*" (2010:22-25), thus suggesting that Beijing holds far grander plans for its naval modernisation.

Moreover, that the PLAN has added a submarine to its 18th Task Force, which is charged with counter-piracy patrols in the Indian Ocean despite the significant reduction of

piracy attacks since 2009, suggests that these missions now equally "*represent useful extra-regional forays, to build relationships, experience and presence* (IISS, 2015:213).

Focusing on India, Ladwig (2012) argues that, despite the increase in quality of its naval platforms, the IN received the lowest share of the overall defence budget between 1991 and 2011, which he explains is due to India's higher concern with land and air based threats (particularly from Pakistan and China). He further explains that when discussing the drivers for India's naval modernisation and expansion, three justifications have remained predominant, despite the changing geopolitical circumstances of the past six decades:

1. *Prevent a hostile power from encroaching on [India's] coastline and maritime areas of interest.*
2. *Project power in a manner fitting the country's desired regional or global role.*
3. *Safeguard the sea lanes which carry India's trade and energy supplies* (2012:25).

According to India's Integrated Headquarters of the Ministry of Defence Navy (IHMDN), its Maritime Military Strategy (MMS) rests upon a number of tasks that the IN carries out in different roles and capacities, both during times of Peace and War. For the former, these include patrolling SLOC and anti-piracy missions (Constabulary Role), Alliance Building, Power Projection and Humanitarian and Disaster Relief missions (Diplomatic Role), peace Keeping and military interventions (as part of an international UN sanctioned coalition) and Strategic Nuclear deterrence. During times of war, the IN's main tasks outlined in the MMS are littoral warfare, sea-control and sea-denial.

Marshall (2012) argues that the most pressing driver behind India's naval modernisation, and the focus of its MMS on sea-control and sea-denial, can be attributed to Beijing's efforts to gain access rights, allegedly for military purposes, to several ports along the South Asian littoral, which in turn has led New Delhi to significantly alter its Military Maritime Doctrine[41].This is a notion supported by the IISS, according to whom "*[India]*

[41] See Annex A

increasingly sees itself as a bastion against China's growing presence in the Indian Ocean" (2014:213).

While Marshall explains that it is not at all uncommon for nations to change military doctrine, in the face of a perceived external threat, he also argues that such change should warrant strong consideration from observers given that "*[it] is a significant step (...) by a nation's security establishment [which] military organizations resist (...) under many circumstances*" (2012:3). In other words, the fact that such change has taken place underscores the severity of India's concerns.

However, according to Ladwig (2012) such concerns would suggest a particular build-up of access-denial capabilities, for which purpose the submarine is the most effective asset, and notes that "*(…) nothing about India's submarine [programme] suggests an anti-access capability to deter extra regional powers is a prime concern*" (2012:28-29). As to power projection, the author argues that while the IN's pattern of acquisitions is congruent with this option, the pace and scope of India's modernisation would not support onshore power projection, should the need arise.

Ladwig (2012) suggests that this ultimately means that the main driver behind India's naval modernisation is to secure shipping lanes and acquiring the ability to effectively respond to humanitarian missions, such as those undertaken following the tsunami of 2004. However, the commissioning of the naval platforms observed above suggests that India too holds power projection aspirations, and not simply constabulary role.

Further to all this, it is now possible to put together a firm idea of the maritime geostrategies of both nations, one of the main objectives of this study and a crucial step in answering the lead question.

2.3.5 Outlining China and India's Maritime Geostrategy

Resorting to the concept of Maritime Geostrategy established in Part I of this dissertation, and based on the data analysed so far, China and India's maritime geostrategies can be described thusly:

As their dependence on overseas imports of energy resources is expected to grow substantially over the coming years, the undisrupted supply of seaborne transportation has become as vital priority in both China and India's national interests (EIA, 2014d).

As the source of the vast percentage of their energy imports are either African or Middle Eastern nations, both nations have converged their economic and military maritime assets (commercial shipping and navies respectively) towards the eastern part of IOR, in order to ensure that the SLOC and the resources which transit on them, are protected from disruption (Hughes, 2013; Till, 2012; Mohan, 2009).

The vulnerability of the SLOC to the non-state threats, such as piracy and maritime terrorism, is a concern shared by both nations, particularly for India who has been the subject of a maritime terrorist attack (Shashikumar, 2009; Moreau, 2008).The possibility of disruptions to the SLOC from the actions of other States is also a concern shared by China and India, however in different ways.

On this note, turning the focus to Southeast Asia and in particular the South China Sea, China's maritime geostrategy takes on a more aggressive stance, opting for the more frequent use of its naval assets, rather than a more diplomatic approach, against lesser states in order to hold its sway regarding the disputes it holds with neighbouring nations over the sovereignty of large sections of the South China Sea (BBC, 2014a; Weimar, 2013). Its search for strategic control over these waters can be directly tied to its concerns over the vulnerability of its strategic passages to the open oceans (i.e. the Strait of Malacca), being blocked by foreign aggressors, such as the USN (O'Rourke, 2013) and IN (The Economist, 2014).

Furthermore, the PLAN's use of forces not traditionally allocated for the purposes of counter-piracy missions suggests the PRC has higher aspirations for its role in the IOR (IISS, 2015).

Conversely, India's maritime geostrategy towards Southeast Asia reflects is concerns over China's growing presence in the IOR. In an attempt to counter-balance this, India has sought to increase its military strength at its Andaman and Nicobar archipelagos, which have

the potential of acting as a barrier to China's access into the Indian Ocean. Also, conscious of its limited capabilities Southeast Asia, India has sought to establish and reaffirm defence cooperation ties with regional nations, such Japan, the Philippines and Vietnam – all of which grow weary of China's growing capabilities – and the United States (Pollman, 2015; Scott, 2013).

Implications for International Maritime Security

China and India's sustained modernisation of their naval forces, and their growing capabilities and aspirations, have fostered concerns over potential rivalry and future conflicts in Southeast Asia and the Indian Ocean region (Hughes, 2013; Till, 2012; Kaplan, 2009).

In line with the Realist perspective, a security dilemma is observable: the concerns raised over China's growing assertiveness and aggression, in the South China Sea, result not only in the procurement of modernised defence capabilities by India and other Southeast Asian actors, but also their concerted efforts to balance against China by securing stronger ties with the United States, the actor most capable of countering it at present (Sakhuja, 2011; Kaplan, 2009). In turn, these actions are perceived by China as provocative and threatening, leading it to procure stronger capabilities (IISS, 2015; Goodwin & Miller; 2013; O'Rourke, 2013).

Overtime, the increase in naval vessels in the area, compounded with the growing tensions, has the potential of erupting into an open conflict (Mohan, 2010), and, while such an occurrence between China and India were believed to be unlikely (Bateman, 2010), recent events in the South China Sea (BBC, 2014b) lead such contentions to be revised.

Furthermore, SLOC vital to the stability of global trade traverse through these areas (EIA, 2014e; Sakhuja, 2011) and the potential of a conflict arising in these waters counts as serious impact to International Maritime Security (Bateman, 2010). Given that China and India's Maritime Geostrategies increasingly veer towards this area, compounded with their increasing ability to counter the United States', the current global leader terms of sea power,

in their neighbouring waters it is safe to establish that both nations can in fact significantly impact International Security in the medium term.

As discussed at the beginning of this dissertation, it is the contention of this study that in order to fully appreciate how China and India's Maritime Geostrategies may come to impact International Maritime Security, particularly when such occurrences are considered unlikely, an 'illustration' of the circumstances analysed above that could potentially lead to a disruption of the global SLOC would be useful.

As such, Part III will resort to scenario building in order to achieve this.

3 POTENTIAL SCENARIOS

3.1 SCENARIO BUILDING

As discussed early on, one of the contentions of this study is the notion that scenario building can help further understand the ways in which China and India's maritime geostrategies, and their efforts to pursue Sea Power, can impact International Maritime Security.

As mentioned at the beginning of this study, due to financial, logistical and time restrictions, the scenario building method carried out in this study will be based on Col. Mick Ryan's approach (2012) to Schwartz's Art of the Long View (1998).

The scenarios in turn will be chosen through Sam Bateman's (2010) Risk Assessment Matrix (see Annex B) and through the analysis of data accrued throughout this study, which are as follows:

1. South China Sea – Conflict Escalation

2. Indian Ocean Region - Major Maritime Terrorist Attack

3.2 SOUTH CHINA SEA CONFLICT ESCALATION

Overview	
Currently holding the World's highest GDP, despite having experienced a significant deceleration over the past decade, China's economy has grown steadily; this has become significantly evident through the living standards of the Chinese population as well as the ever growing capabilities of the PLA. Emboldened by its growing economic and military power, Beijing's posture in the region has become even more assertive and aggressive. No longer reticent over the use of their naval assets, all maritime disputes are now consistently met with a show of force. Still heavily reliant on its economic trade with China, and weary of its growing military force, the United States is slow to react to these boasts, resorting mainly to calls for diplomatic discourse and peaceful resolution among all parties. China's vast population and reduced agricultural output, due to significant environmental degradation and pollution, has left it heavily reliant on fish as a source of food, leading Beijing to pursue aggressive fishing policies in what it considers its EEZ (the vast majority of the South China Sea), using its Navy to harass fishing vessels from neighbouring countries such as Indonesia, the Philippines and Vietnam.	
Incident	
Week 1–2	A Vietnamese fishing vessel is rammed and sunk by a Chinese coast guard frigate. Despite all passengers escaping on life boats, several hours elapse before they can be rescued. As a result, three passengers succumb to injuries sustained, compounded by hypothermia and dehydration.
Week 3-4	Angered by these practices, Vietnam dispatches two frigates and three corvettes to patrol its waters and provide protection for its fishing vessels. In short order, Hanoi announces that it has apprehended two Chinese trawlers, after intercepting these while allegedly practising illegal fishing within its waters.
Week 4	Chinese Embassy to Hanoi issues statement denying allegations that vessels were in Vietnamese waters and demands immediate release of its citizens, as

	well as financial compensation for the spoilt cargo.
Week 5	Vietnam reinforces claims and refuses Chinese demands.
Week 5	Beijing dispatches its carrier group from its South Fleet to a Vietnamese offshore rig, currently under development, enforcing a blockade of all incoming and outgoing ships. Operations on the rig are effectively put on hold.
Week 5	Global backlash from regional and international community. Regional actors voice their anger through international *fora*, while privately reaching to the United States for guarantees that Defence Alliances will be upheld and fulfilled should the crisis escalate any further. Oil prices witness a slight rise due to speculations over the situation and potential detours to regular trade routes. Vietnam dispatches its single destroyer along with two frigates. Reports of fire exchanged are issued, however both parties deny first strike. The Vietnamese destroyer is sunk; Vietnam declares itself at war with the People's Republic of China. Both China and Vietnam call back respective embassies and initiate procedures to extricate personnel. An emergency session of the United Nations Security Council is convened to address the situation. A cease fire is called upon and all parties are urged to maintain peace. Initial resolutions to the crisis are vetoed by the People's Republic of China.
Week 6	Fearing a far greater escalation of the situation, the President of the United States orders the 7th Fleet to the area, with the aim of ensuring overall security of the region and its interests. India dispatches a squadron from its Eastern fleet in assistance to Vietnam.
Week 6.	Amid mounting condemnation from the international community, China withdraws its carrier group from Vietnamese waters, and calls for a bilateral resolution to the issue with Vietnam.

Potential implications for this scenario:

- Heightened levels of distrust of China among neighbouring nations, increasing the potential for further conflicts in the future;
- Fear and speculation over the security of the region, leads commercial shipping vessels and/or their business owners to seek safer, albeit longer routes, resulting in the potential loss of trade for the region, increased costs due to increased distances;
- Potential fluctuations in international markets, due to the financial importance of Southeast Asia.

3.3 MARITIME TERRORISM SCENARIO

<table>
<tr><td colspan="2">Overview</td></tr>
<tr><td colspan="2">Though China maintains the largest GDP in the World, followed closely by the United States India's has become the third largest. Not only does it compete on a more even footing with China, for shares of the global market, but thanks to its much younger population, investors increasingly look to India as a source of labour and investment.
It’s healthy economy and growing defence cooperation ties with the United States and Japan have allowed India to further develop its defence infrastructure; as a consequence, the latter have also increased its exposure to terrorist activities in the form of religious extremism. Despite increased security measures and the implementation of various counter-terrorism programs, to avoid attacks on the same scale as the 2008 Mumbai massacre, successful small scale attacks from rogue cells still occur.</td></tr>
<tr><td colspan="2">Incident</td></tr>
<tr><td>Week 1</td><td>A series of explosions occur at the Southern Command Naval Base in Cochin, in the Kerala region of India. Initial reports indicate 10 fatalities and several injuries along with severe damages to different sections of the hull of aircraft carrier INS Vikrant, which was docked for scheduled maintenance. While the preliminary investigation is unable to determine the cause of the explosions, damage to the hull indicates the explosions took place underwater and outside the vessel. Terrorist attacks are suspected and the country’s armed forces and security organisations are raised to high alert.</td></tr>
<tr><td>Week 2</td><td>Investigations by the Indian Defence Intelligence Agency, through intercepted phone conversations, to the arrest of a Pakistani national, believed to have connections with the terrorist group Lashkar-e-Taiba; the individual confesses to acquiring explosive materials and personal diving equipment for known LeT associates.
A hypothesis is raised that LeT agents, trained in diving, swam from a nearby beach to the naval base with explosive ordinance attached to their bodies. Allegations that Pakistan’s ISI provided training and intelligence data to carry out the missions are made throughout the Indian media. The Pakistani</td></tr>
</table>

	government denies any involvement and reiterates its stance against terrorism. India, Pakistan, Bangladesh, Sri Lanka, Malaysia and Singapore raise port security, increasing the frequency and thoroughness of vessel inspections. This results in increased delays for various maritime trade transactions.
Week 3-4	Tensions between India and Pakistan rise, and India increases its Naval and Coast Guard patrols along its Western Coast. Vessels originating from or bound to Pakistan are intercepted and inspected frequently. The PRC raises concerns over the harassment of its vessels outside of Indian territorial waters, and dispatches a carrier group to the region. Emboldened by the PLANs presence, Pakistan also dispatches naval units. While trying to intercept and board a container vessel, bound to Shanghai, an Indian frigate is hailed by a Pakistani frigate and ordered to desist. Fire is exchanged between both vessels, resulting in the defeat and retreat of the Pakistani vessel.
Week 5	Reports of Chinese naval vessels ramming into Indian naval vessels are issued. No fire is exchanged between either party. An emergency session of the United Nations Security Council is convened to address the situation. A cease fire between India and Pakistan is called upon and all parties are urged to maintain peace. A resolution is passed calling on all nations to assist with patrolling the Arabian Sea.
Week 6	India begins to recall its naval vessels and carries out patrols in accordance with the UN Security Council resolution. Talks between China, Pakistan and India are called to increase cooperation between all countries.

Implications:

- Disruptions to international trade, particularly vessels carrying liquid energy resources, such as oil and gas;
- Heightened tensions between India and Pakistan in the Arabian Sea place SLOC at danger of possible spill over effects;
- Increased potential for open conflict between China and India over the former's alliance with Pakistan.

CONCLUSION

This study sought to determine whether China and India's current maritime geostrategies, based on the trends presented by their efforts to modernise and increase their respective Sea Power capabilities, can impact the stability of International Maritime Security in the medium term, i.e. by 2030. It can thus be concluded that both nations' maritime geostrategies are capable of doing so in the medium term, based on the observable mounting security dilemma that results from the combination of both nations' seeking to increase their sea power capabilities and directing these towards locations where SLOC vital to global trade are most vulnerable.

Furthermore, a number of secondary objectives deemed crucial to achieving the main objective of this study were also put forward. These secondary objectives consisted of establishing working concepts for Geopolitics, Geostrategy, Sea Power and International Maritime Security, terms that make up the foundation of the subject matter, and identifying how these would assist in achieving the main objective. Not only were all concepts established but also, based on the inherent nature that the concept of Power plays in Geostrategy, this study was able to correlate the concepts of Sea Power and Geostrategy to determine that the former is the component of Maritime Geostrategy through which nations are able to impact International Maritime Security.

One of the key aspects of this study was the identification that a nation's Sea Power is ultimately relative to that of another and that, given the concept of Sea Power itself, a nation is unable to significantly impact International Maritime Security if this goes against the interests of another nation whose sea power capabilities are stronger.

It was thus determined that in order to understand whether China and India are capable of significantly impacting International Maritime Security in the medium term, their sea power capabilities and trends would have to be measured up against those of the United States. To do so, it was established that Sakhuja's adaptation of Ray S. Cline's power assessment equation would provide the best means of quantifying the differences in the nations' abilities. In this respect, the teachings from Mahan and Corbett were crucial;

through Mahan's EoS this study was able to identify, quantify and populate Sakhuja's equation with the relevant data, and Corbett's analysis on the purpose of naval warfare of the advantages/disadvantages provided by geographic location and formations allowed for the subjectivity of each nation's sea power capabilities to be taken into account.

Part II of this dissertation sought to do precisely this, and established that while China and India currently do not possess the means to affect International Maritime Security, given the USN ability to counter their actions; by 2030, they will be increasingly able to counter the USN in their neighbouring waters. As establishing this alone is insufficient to accurately portray China and India's maritime geostrategies, and thus determine whether the latter can potentially impact international maritime security in the medium term, Part II also sought to outline these.

It was shown that, given the projected growth of their economies and the resulting dependence on imported energy resources, the vast majority of which are seaborne, the geographical focus of their energy security –as part of their national security – will increasingly veer towards the maritime domain and, more specifically towards the African and Middle Eastern coasts and towards strategic passage ways through which maritime trade transits. In order to defend these interests, and ensure the undisrupted flow of seaborne energy resources, both nations have sought to enhance their Sea Power capabilities through the modernisation of their naval navies.

It was also determined that, while the extent and details of the PRC's maritime doctrine is unknown, official documents suggests that the safety of the SLOC is a prime concern in its security calculations, a concern that is equally shared by India. In line with the teachings of Sir Julian Corbett, it was shown that any disruptions to these SLOC, which act as arteries to China and India's economies, given that over 80% of imported energy resources are seaborne, would present a clear threat to their security, and that of other nations who are equally dependent on their stability.

The potential threat of an antagonistic nation blocking the flow of these resources, through strategic passages ways such as the Strait of Malacca, or the existing threat of

maritime pirates/terrorists hijacking and deviating a ship off its course, suggests that such concerns and all mitigating measures undertaken by China and India, to safeguard the maritime security of their national interests, are valid.

However, given that both nations have sought to enhance their power projection capabilities, through the acquisition and/or development of naval platforms that traditionally serve offensive purposes, has drawn the attention of the international community and raised concerns.

It was also shown that as it gradually resorts to more aggressive tactics to assert its claims over the East and South China Seas, the PRC is increasingly looked upon with suspicion, both by its regional neighbours (such as Japan, the Philippines, South Korea and Vietnam) and extra-regional actors such as the United States and India. To Beijing's chagrin, this has resulted in its Southeast Asian neighbours seeking to modernise their own naval capabilities and to strengthen existing defence cooperation ties between each other and the United States, and the development of closer defence ties between Japan and Vietnam with India, in what is an apparent security dilemma as understood by the realist perspective. While the occurrence of a conflict between China and any of its neighbouring states in the South China Sea is considered unlikely, the impact of such an occurrence on International Maritime Security would be major. Given the increasing numbers of naval units and growing tensions, the probabilities of an open conflict occurring in these waters are increasingly higher.

Furthermore, it was shown that the existence of threats such as piracy and maritime terrorism present a direct threat not only to vessels that transit global SLOC but also to states themselves, such as the Mumbai attacks of 2008. States seeking to counter such threats unanimously risk alarming other states as to their actual intentions.

Also, as discussed at the beginning of this dissertation, in an attempt to highlight the findings observed this study resorted to scenario building in order to illustrate exactly how China and India's Maritime Geostrategies may impact International Maritime Security.

The first scenario, which focused on an open conflict involving China and Vietnam in the South China Sea, highlighted that China's growing confidence in its abilities and aggressiveness towards its maritime neighbours, could result in it resorting to extreme measure in order to secure its interests. The ramifications of such an occurrence would impact severely on global trade and international financial markets and thus on the international community as a whole.

The second scenario explored the likely outcome of a successful maritime terrorist attack on India and one of its national symbols. The severity of such an attack and the likelihood that India would accuse Pakistani involvement, based on past occurrences, suggests that India would take extreme and biased actions towards Pakistan. The potential of these impacting China interests would likely draw it into the foray and, while not strong enough to counter India in its own neighbourhood, the presence of the PLAN would still raise concerns at the UN level, leading to an international concerted effort to dampen the situation.

In sum, China and India will grow increasingly more present not only in the maritime domain as a whole but more importantly in each other's respective maritime neighbourhoods, given that their core interests not only coincide but also cross. As such, based on the realist perspective, each nation will also seek to ensure that their core interests are met, even if it means against the other's will. Given that both nations also grow increasingly more powerful where sea power is concerned, this is a subject that will continue to gain considerable focus.

On this note, geopolitics and geostrategy are useful means of analysis as in conjunction they provide not only the means of detailing the underlying context in question but also of outlining possible outcomes based on observable data and trends. Where Sea Power is concerned, while it was not possible in this instance to overcome certain obstacles such as the intangibility of variables such Strategic Doctrine and National Will, this in no way invalidates the usefulness of Sakhuja's equation for Maritime Power perception. Future studies seeking to focus primarily on the sea power capabilities of nations may not only chose to make use of such an equation but also endeavour to develop more empirical means

of quantifying or, at the very least, accounting for the intangible nature of the variables in question.

Finally, it is the contention of this study that the use of scenarios in social sciences should be further encouraged and developed, as they serve not only to illustrate the arguments and conclusions being discussed but also the potential ramifications.

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ANNEX A – GLOSSARY

Maritime Terrorism – The undertaking of terrorist acts and activities emanating from or within the maritime environment, either through or against vessels or fixed platforms, at sea or in ports, or against any one of their passengers or personnel, coastal facilities or settlements, including tourist resorts, port areas and port towns or cities (Shashikumar, 2009).

Military (Maritime) Doctrine – Understood as the fundamental principles by which a nation's military (naval) forces guide their actions in support of its national objectives (Marshall, 2012).

Naval Modernisation – The efforts put in place by a particular nation to not only modernise its navy but also those military forces outside it, (i.e. land-based anti-ship ballistic missiles (ASBMs), surface-to-air missiles (SAMs), and land-based long-range radars for detecting and tracking ships at sea) which can be used to deter and/or counter foreign navies (O'Rourke, 2013).

Political Geography – Can be understood as the geographic study of political phenomena, focusing also on the spatial dimensions and relations of Power (Lara, 2009).

Right of Passage – According to Article 18 the UNCLOS, right of passage may be understood as "*(…) navigation through the territorial sea for the purpose of:*

(a) traversing that sea without entering internal waters or calling at a roadstead or port facility outside internal waters; or

(b) proceeding to or from internal waters or a call at such roadstead or port facility".

Strategic Culture - Strategic culture is that set of shared beliefs, assumptions, and modes of behaviour, derived from common experiences and accepted narratives (both oral and written), that shape collective identity and relationships to other groups, and which determine appropriate ends and means for achieving security objectives (Rodney, 2006).

ANNEX B – MARITIME RISK ASSESSMENT MATRIX

Threat Level /	Neglible	Minor	Significant	Major	Catastrophic
Almost Certain	1. Marine Pollution; 2. Piracy & Armed Robbery; and, 3. Smuggling.	1. Fisheries Incident.			
Likely	1. Natural disasters.	1. Border Incident.	1. Climate Change; 2. Intruder submarine incident		
Possible		1. Ferry Terrorist Attack;		1. Sovereignty Clash in Southeast Asia.	
Unlikely				1. Major terrorist attack; 2. Conflict in Northeast Asia.	1. WMD attack; 2. Conflict between China and India.
Rare					1. ASEAN-China Conflict 2. Bilateral conflict in Southeast Asia.